DOES NOT CIRCULATE

THE

ILLINOIS

MEDICAL JOURNAL

MARCH 1961

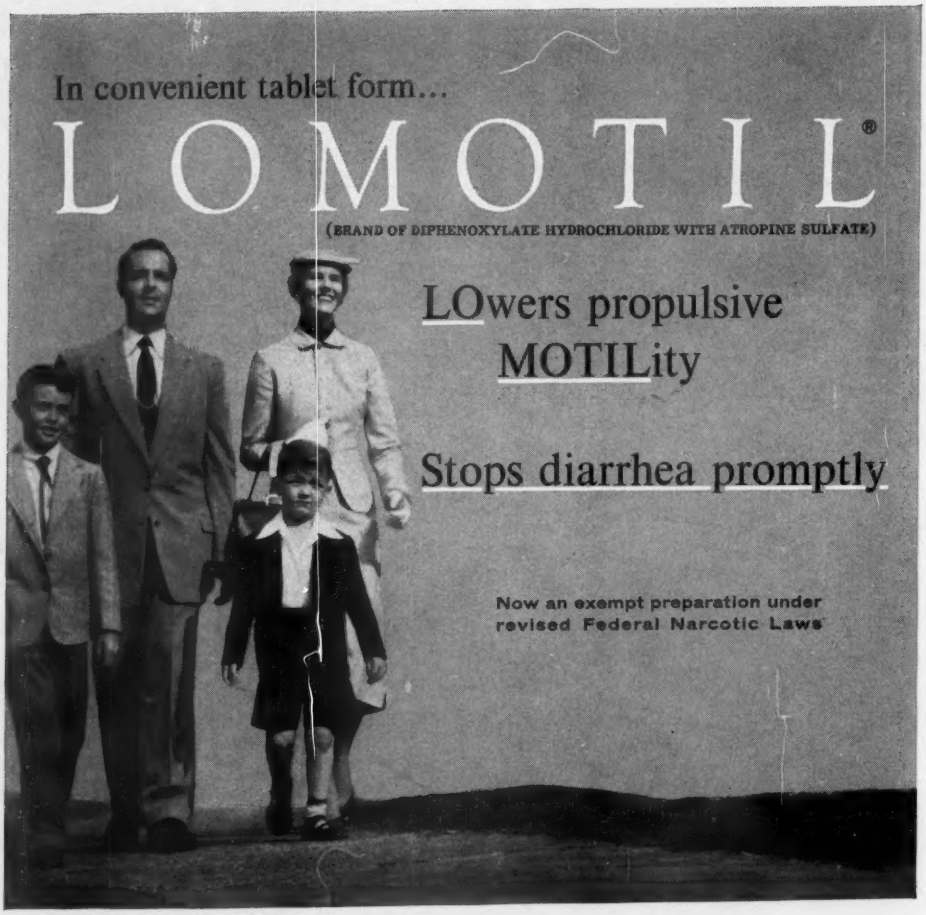
Vol. 119 No. 3

THE UNIVERSITY OF MICHIGAN
MAR 4 1961
MEDICAL LIBRARY

A Reminder: Your
121st Annual Meeting Dates
Are May 14th-18th.
Mark Your Calendar!

OFFICIAL JOURNAL of the ILLINOIS STATE MEDICAL SOCIETY

TABLE of CONTENTS: PAGE 5


In convenient tablet form...
LOMOTIL®
(BRAND OF DIPHENOXYLATE HYDROCHLORIDE WITH ATROPINE SULFATE)
LOwers propulsive MOTILity
Stops diarrhea promptly
Now an exempt preparation under revised Federal Narcotic Laws

Extensive clinical experience in the United States and Europe demonstrates that Lomotil provides prompt and positive symptomatic control of diarrhea.

Lomotil possesses a highly efficient antiperistaltic action. It controls diarrhea with few or none of the undesirable side effects of many other commonly used antiperistaltic agents.

In the control of diarrhea, Lomotil offers safety, efficacy and greater convenience.

DOSAGE: The recommended initial dosage for adults is two tablets (2.5 mg. each) three or four times daily, reduced to meet the requirements of each patient as soon as the diarrhea is under control. Maintenance dosage may be as low as two tablets daily. Lomotil, brand of diphenoxylate hydrochloride with atropine sulfate, is supplied as unscored, uncoated white tablets of 2.5 mg., each containing 0.025 mg. ($\frac{1}{2400}$ grain) of atropine sulfate to discourage deliberate overdosage.

Recommended dosage schedules should not be exceeded.

G. D. SEARLE & CO.
CHICAGO 80, ILLINOIS
Research in the Service of Medicine

The ILLINOIS Medical Journal

Editor
T. R. Van Dellen, M.D.

Assistant Editor
Martha E. Dana

Business Manager
L. E. Malley

Director of Publications
Albert G. Boeck

Executive Administrator
Robert L. Richards

Vol. 119, No. 3 **March, 1961**

Editorial Board

EDWIN F. HIRSCH, M.D., *Chairman*
JAMES H. CROSS, M.D.
FREDERICK H. FALLS, M.D.
JAMES H. HUTTON, M.D.
FRANCIS I. LEDERER, M.D.
SAMUEL A. LEVINSON, M.D.
JACOB E. REISCH, M.D.
ARKELL M. VAUGHN, M.D.
EDWARD F. WEBB, M.D.
JOHN R. WOLFF, M.D.

●

Journal Committee

JACOB E. REISCH, M.D., *Chairman*
W. H. PALMER, M.D.
ALBERT VANDERKLOOT, M.D.
PAUL P. YOUNGBERG, M.D.

●

Published monthly by the Illinois State Medical Society, 360 N. Michigan Avenue, Chicago 1, Ill. Subscription $4.00 per year, in advance, postage prepaid, for the United States, Cuba, Puerto Rico, Philippine Islands, Hawaiian Islands, and Mexico. $6.00 per year for all foreign countries included in the postal union. Canada, $4.50. Single current copies 50 cents. By mail, 60 cents.

Entered as Second Class Matter Nov. 12, 1952, at the Post Office, Mendota, Illinois, under the Act of March 8, 1879.

Acceptance for mailing at special rate of postage provided for in section 1102, Act of Oct. 8, 1917, authorized July 15, 1918.

POSTMASTER: Send notices on form No. 3579 to Illinois State Medical Society, 360 N. Michigan Ave., Chicago 1, Ill.

Copyright 1961, The Illinois State Medical Society.

Contents

CLINICAL ARTICLES

Eating Habits and "Metabolic" Diseases
Clarence Cohn, M.D., Chicago 125
Oral Antidiabetic Agents
Joseph R. Davis, M.D., Chicago 127
Occupational Diseases of the Skin Among the Farmers of Illinois—A Symposium
Hans M. Buley, M.D., Champaign, Chairman; *George Dickison, M.D.*, Peoria; and *Malcolm Spencer, M.D.*, Danville 131
A Special Care Unit in a Community General Hospital
William K. Stephan, M.D., and *C. Elliott Bell, M.D.*, Decatur 146
Alcoholism and Food Allergy
Herbert E. Karolus, M.D., Dwight 151
The View Box, *Franz Gampl, M.D.*, Chicago 156
Medicine in the Out-of-Doors — Insulated Clothing
Julius M. Kowalski, M.D., Princeton 157

CASE REPORT

Membranous Dysmenorrhea
Joseph P. Miranti, M.D., Greenup; *John F. Hubbard, M.D.*, Mattoon; and *K. J. Costich*, Oak Park 153

FEATURE ARTICLE

Dr. Tom Spies Pioneer Medical Nutritionist
James R. Wilson, M.D., Winnetka 155

CLINICAL-SURGICAL CONFERENCES

The Management of External Small Bowel Fistulas
Robert J. Baker, M.D., Moderator; *William Grove, M.D.; Irving F. Stein, Jr., M.D.* 139

OFFICAL BUSINESS

Statement on Policies and Programs on Health Care of the Aged, *E. A. Piszczek, M.D.* 161
Present Status of the Impartial Medical Testimony Rule
Claude C. Gustine 163

EDITORIALS

The philosophy of modern physicians, *Jerome R. Head, M.D.* . 164
Chromosomal aberrations 164
Solving nurse and intern shortages 165
Presenting the problem of smoking, *Frederick Steigmann, M.D.* 165
Time for action 167
Avoiding malpractice suits 167

AT THE EDITOR'S DESK 168

ANNOUNCEMENTS 171

NEWS OF STATE 177

REFERENCE PAGE NO. XVII

Schools in Nursing 175

BOOK REVIEWS 182

Illinois State Medical Society

OFFICERS

H. Close Hesseltine, President
5841 S. Maryland Avenue, Chicago

Edwin S. Hamilton, President-Elect
151 N. Schuyler Avenue, Kankakee

Andrew J. Brislen, 1st Vice President
6060 Drexel Avenue, Chicago

Jacob E. Reisch, Secretary-Treasurer
1129 South Second Street, Springfield

Clinton D. Swickard, 2nd Vice President
Charleston

COUNCILORS

E. A. Piszczek, Chairman
6410 N. Leona Ave., Chicago

Carl E. Clark, 1st district
Sycamore, Illinois

Ralph N. Redmond, 2nd district
101 East Miller Road, Sterling

William E. Adams, 3rd district
950 E. 59th St., Chicago

John Lester Reichert, 3rd district
1791 Howard, Chicago

Caesar Portes, 3rd district
25 E. Washington St., Chicago

E. A. Piszczek, 3rd district
6410 N. Leona Ave., Chicago

Ted LeBoy, 3rd district
5063 W. Madison, Chicago

J. Ernest Breed, 3rd district
55 E. Washington St., Chicago

Fred C. Endres, 4th district
4609A Prospect Road, Peoria Heights

Jacob E. Reisch, 5th district
1129 S. Second, Springfield

Newton DuPuy, 6th district
1101 Maine Street, Quincy

Arthur F. Goodyear, 7th district
142 E. Prairie Ave., Decatur

Harlan English, 8th district
909 N. Logan, Danville

B. E. Montgomery, 9th district
Harrisburg

W. W. Fullerton, 10th district
101 N. Market, Sparta

Bernard Klein, 11th district
4 E. Clinton, Joliet

Joseph T. O'Neill, Councilor at Large
628 Columbus Street, Ottawa

COMMITTEES WITHIN THE COUNCIL

EXECUTIVE COMMITTEE

E. A. Piszczek
Jacob E. Reisch
H. Close Hesseltine
Burtis E. Montgomery
Edwin S. Hamilton
Caesar Portes

FINANCE COMMITTEE

Burtis E. Montgomery, Chairman
William E. Adams
Newton DuPuy

DELEGATES AND ALTERNATES TO THE AMA

Walter C. Bornemeier, Chicago
George C. Turner, Chicago
Harlan English, Danville
Jacob E. Reisch, Springfield
Frank H. Fowler, Chicago
E. A. Piszczek, Chicago
Arthur F. Goodyear, Decatur
E. W. Cannady, E. St. Louis
Maurice M. Hoeltgen, Chicago
H. Close Hesseltine, Chicago
Burtis E. Montgomery, Harrisburg
Lester S. Reavley, Sterling
Joseph T. O'Neill, Ottawa
Norman L. Sheehe, Rockford
H. Kenneth Scatliff, Chicago
Eugene T. McEnery, Chicago
Carl F. Steinhoff, Chicago
Norris J. Heckel, Chicago
Leo P. A. Sweeney, Chicago
Raleigh C. Oldfield, Oak Park
Harry Mantz, Alton
Paul A. Dailey, Carrollton

twin g. i. symptoms?
pain
spasm

twin g. i. problems?
hyperacidity
hypermotility

prescribe "twin action"

ALUCEN*

new anticholinergic-antacid chewable tablets

for superior adjunctive therapy of *peptic ulcer*... superior relief of *gastritis* due to gastric hyperacidity and g.i. hypermotility

ALUCEN contains a new low-dosage anticholinergic, methscopolamine nitrate, for efficient antisecretory-antispasmodic control...5 to 6 times as active as atropine yet low in atropine-type side effects

plus

a superior new antacid complex—aluminum hydroxide-magnesium carbonate co-dried gel—outstanding for rapid, sustained pH control in the desirable therapeutic range of 3.5 to 4.5 with minimal likelihood of constipation.

Each "twin action" ALUCEN tablet contains: 1 mg. methscopolamine nitrate and 380 mg. aluminum hydroxide-magnesium carbonate co-dried gel (U.S. Patent 2,797,978), as a palatable, mildly peppermint-flavored chewable tablet.

Usual Dosage: 1 or 2 tablets after meals and at *bedtime*, or as required in the control of pain. Total daily dosage should not exceed 10 tablets.

Supplied: Bottles of 100 and 500 tablets.

*Trademark

Complete literature on request

CENTRAL

ALUCEN

THE CENTRAL PHARMACAL COMPANY
Products Born of Continuous Research
Seymour, Indiana

The Month in Washington

President Kennedy asked Congress to increase social security taxes to finance limited medical care for elderly persons on the social security rolls, a plan opposed by the medical profession. The proposal was part of a sweeping health program outlined by Kennedy in a special message to Congress during his first month in the White House.

The Kennedy program also included federal aid for construction and operation of medical schools, scholarships for medical and dental students, grants for community nursing and hospital services, stepped-up medical research, and expanded federal activity in the field of child and youth health.

Under Kennedy's proposal, social security beneficiaries 65 years and older could get up to 90 days of hospitalization for each single illness. However, the patient would have to pay $10 daily for the first nine days of hospitalization with a minimum payment of $20.

After release from a hospital, the elderly person could get up to 180 days in a nursing home. The social security program also would provide for payment by the government of all out-patient diagnostic costs in excess of $20 and community visiting nurse services.

The program would be financed by increasing social security taxes by one-fourth of one per cent on both employers and workers and by three-eighths of one per cent on self-employed persons covered by social security. The social security tax base also would be increased from the present $4,800 a year to $5,000.

Enactment of this proposal, coupled with another Kennedy recommendation and increases in the social security tax already scheduled in the law, would mean that workers and employers would be paying $250 each in social security taxes in 1969.

Nationwide television audiences were told by an American Medical Association spokesman why the medical profession supports the Kerr-Mills program of medical care for the aged and opposes tieing it in with social security.

In television debates with Sen. Hubert Humphrey (D., Minn.) on NBC-TV and Walter Reuther, organized labor spokesman, on CBS-TV, Dr. Edward R. Annis of Miami, Fla., described the Kerr-Mills program as "sound and effective." He said it "must be given the chance it deserves. Congress passed it because it believed that the important thing was to help the people who need help; to help them quickly; and to help them through the machinery of local government," Dr. Annis said.

The AMA Board of Trustees charged the CBS network with "misrepresentations, bias, and distortions" on another program: "The Business of Health—Medicine, Money and Politics."

The network edited out of the taped program the AMA's true position:

"The AMA believes that any medical care plan

(*Continued on page 22*)

new Tandearil Geigy

brand of oxyphenbutazone

a new development in nonhormonal, anti-inflammatory therapy

more specific than steroids—
Acts directly on the inflammatory lesion **without** altering pituitary-adrenal function . . . **without** impairing immunity responses.[8,11]

more dependable than enzymes—
Rapid and complete absorption, without the uncertainty of oral or buccal enzyme therapy.[8]

more potent than salicylates—
Anti-inflammatory potency of Tandearil markedly superior to aspirin.[12]

Remarkably useful in a wide variety of inflammatory conditions, including: rheumatoid arthritis, spondylitis, osteoarthritis[1,2,3]; gout[1,4,5]; acute superficial thrombophlebitis[6,7]; painful shoulder (peritendinitis, capsulitis, bursitis, and acute arthritis of that joint)[1,4]; severe forms of a variety of local inflammatory conditions[8,9,10].

The physician should be thoroughly familiar with the dosage, side effects, precautions and contraindications of Tandearil before prescribing. Full product information available on request.

Round, tan, sugar-coated tablets of 100 mg. in bottles of 100 and 1000.

references:
1. Graham, W.: Canad. M.A.J.: 82:1005 (May 28) 1960. 2. Vaughn, P. P.; Howell, D. S., and Kim, J. M.: Arth. and Rheumat. 2:212, 1959. 3. O'Reilly, T. J.: J. Irish M.A. 48:108, 1960. 4. Cotrell, J. F., Jr., and Rousselot, L. M.: Am. J. Surg. 98:31, 1959. 5. Brodie, B. B., et al., in Contemporary Rheumatology 1958, p. 600. 6. Stein, I. O.: Ann. N. Y. Acad. Sc. 86:307 (March 30) 1960. 7. Barnsley, W., and Roth, W.: Praxis 48:39, 1959. 8. Miller, J. M., et al.: Antibiotic Med. and Clin. Rousselot, L. M., et al.: J. Surg. 97:439, 1959. 10. Summaries of individual case histories reported to Geigy. 11. Domenjoz, R.: Ann. N. Y. Acad. Sc. 86:263, 1960. 12. Smyth, C. J.: Ann. N.Y. Acad. Sc. 86:292, 1960.

Geigy Pharmaceuticals
Division of Geigy Chemical Corporation
Ardsley, New York

WASHINGTON (Continued)

is both unsound and unfair which would compel working people to shoulder increased social security taxes to finance health costs of all those over 65 (under social security), rich and poor alike, regardless of whether they want or need such help and which, at the same time, ignores millions of indigent elderly who do need help."

Kennedy's health program faced strong opposition in Congress. The concensus of Capital Hill observers was that it stood a 50-50 chance of getting Congressional approval but not before it had been cut down. There were some who doubted that the Administration's program for medical care of the aged would be acted upon, at least by both houses of Congress, before next year.

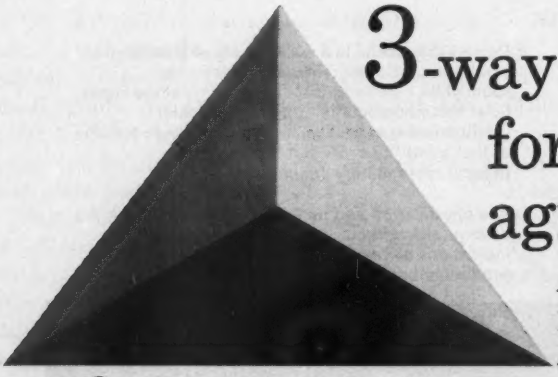
Even some Democratic Congressmen with the liberal label were taken back by the scope of Kennedy's health program.

Arthur H. Motley, president of the Chamber of Commerce of the United States, warned that social security taxes are being increased to a point "where people might rebel against the whole Social Security system."

He contended that this nation's present personal medical care system is the best of any large nation. "It's worth crusading for and that is what the Chamber is doing," Motley said.

A good idea

With the approach of more and more socialization in the practice of medicine, audits of hospital records will become more and more important, for it stands to reason if a third party begins to exercise more authority in the field of health care, medical audits of clinical procedures will become necessary. If a staff then does not audit its own hospital work, a third party will take over the responsibility. And if a staff permits a third party to audit how they practice medicine, they will have no one but themselves to blame when they lose their freedom in the practice of medicine. An Internal Medical Audit Committee in a hospital is an important safeguard to prevent this loss of freedom. *Don W. Branham, M.D. Editorial. The Internal Medical Audit. J. Oklahoma M. A. December 1960.*



3-way support for the aging patient...

ASSISTS PROTEIN UPTAKE
IMPROVES MENTAL OUTLOOK
AIDS NUTRITIONAL INTAKE

NEW 1 small capsule every morning

GEVRESTIN®

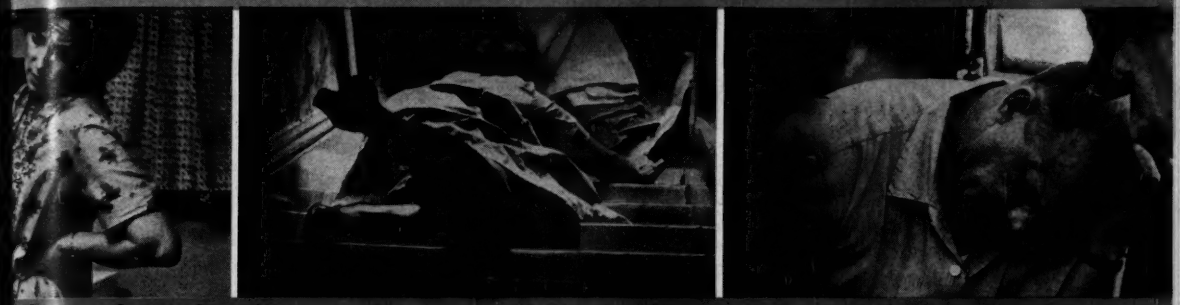
Geriatric Vitamins-Minerals-Hormones-d-Amphetamine Lederle

Each capsule contains: Ethinyl Estradiol 0.01 mg. • Methyl Testosterone 2.5 mg. • d-Amphetamine Sulfate 2.5 mg. • Vitamin A (Acetate) 5,000 U.S.P. Units • Vitamin D 500 U.S.P. Units • Vitamin B_{12} with AUTRINIC® Intrinsic Factor Concentrate 1/15 U.S.P. Unit (Oral) • Thiamine Mononitrate (B_1) 5 mg. • Riboflavin (B_2) 5 mg. • Niacinamide 15 mg. • Pyridoxine HCl (B_6) 0.5 mg. • Calcium Pantothenate 5 mg. • Choline Bitartrate 25 mg. • Inositol 25 mg. • Ascorbic Acid (C) as Calcium Ascorbate 50 mg. • l-Lysine Monohydrochloride 25 mg. • Vitamin E (Tocopherol Acid Succinate) 10 Int. Units • Rutin 12.5 mg. • Ferrous Fumarate (Elemental Iron, 10 mg.) 30.4 mg. • Iodine (as KI) 0.1 mg. • Calcium (as $CaHPO_4$) 35 mg. • Phosphorus (as $CaHPO_4$) 27 mg. • Fluorine (as CaF_2) 0.1 mg. • Copper (as CuO) 1 mg. • Potassium (as K_2SO_4) 5 mg. • Manganese (as MnO_2) 1 mg. • Zinc (as ZnO) 0.5 mg. • Magnesium (MgO) 1 mg. • Boron (as $Na_2B_4O_7.10H_2O$) 0.1 mg. Bottles of 100, 1000.

LEDERLE LABORATORIES, a Division of AMERICAN CYANAMID COMPANY, Pearl River, New York

Percodan tablets effectively relieve pain through a range of

intensities commencing with moderate pain and extending



through major traumatic areas into further regions of severe pain

Percodan®

(Salts of Dihydrohydroxycodeinone and Homatropine, plus APC)

TABLETS

for pain

prompt relief
profound relief
prolonged relief

ACTS FASTER—usually within 5-15 minutes. **LASTS LONGER**—usually 6 hours or more. **MORE THOROUGH RELIEF**—permits uninterrupted sleep through the night. **RARELY CONSTIPATES**—excellent for chronic or bedridden patients.

AVERAGE ADULT DOSE: 1 tablet every 6 hours. May be habit forming. Federal law permits oral prescription.

Each PERCODAN* Tablet contains 4.50 mg. dihydrohydroxycodeinone hydrochloride, 0.38 mg. dihydrohydroxycodeinone terephthalate, 0.38 mg. homatropine terephthalate, 224 mg. acetylsalicylic acid, 160 mg. acetophenetidin, and 32 mg. caffeine.

Also available—for greater flexibility in dosage—PERCODAN®-DEMI: The PERCODAN formula with one-half the amount of salts of dihydrohydroxycodeinone and homatropine.

LITERATURE AVAILABLE ON REQUEST

Endo

ENDO LABORATORIES
Richmond Hill 18, New York

*U.S. Patent Nos. 2,628,185 and 2,907,768

Come in as soon as you get your face on.

Oral isotopes

This necessity for more knowledge can be exemplified again by a very simple and well known example. When radioactive iodine is given for a thyroid function test, it is common practice to assume a given uptake in the thyroid and on the basis of this make certain computations regarding the dose to the gland. This is then taken as the determining factor. Early in this development attention was given to the iodine in the hematopoietic organs prior to thyroid pick up, until it was demonstrated that there were no significant effects.

Experience, now of close to 20 years, has validated this procedure yet at the same time overlooks a paradox whose significance is entirely unclear. When radioactive iodine is given by mouth, the entire dose is of course promptly delivered to the stomach. Here some radiation occurs during the interval before passage into the small intestine and complete absorption into the blood has ocurred. When the iodine is in the blood and circulating, a very considerable fraction reaches the gastric circulation and here it is ex-

THE JOURNAL OF THE AMERICAN MEDICAL ASSOCIATION

JAMA

VOL. 174, NO. 5 OCTOBER 1, 1960

newest J.A.M.A. paper[1] reports

DBI

"oral therapy of choice" in management of diabetes . . . from the mild stable adult to the severe labile juvenile

creted as hydrogen iodide with the iodine replacing the chlorine of the usual hydrochloric acid of the stomach. Through this mechanism the secretory cells of the stomach are receiving a very considerable but not directly measurable dose of radiation. What may be the long term effect of such exposure wherein the dose may be one or several times greater than the thyroid dose? Does it lead to achlorhydria or to cancer? If we were to find ourselves in a period of rapidly increasing incidence of gastric cancer instead of a period in which it is falling, I assure you that this fact would be prominently displayed and the phenomenon would be discussed at length in those debates occurring about the desirability of using radioactive isotopes in so many individuals. Fortunately, experience thus far assigns a role of no significance to this phenomenon. *L. E. Farr, M.D. Educational Concepts in Nuclear Medicine—Present and Future. Northwest Med. December, 1960.*

Cleverness is not wisdom. —*Euripides*

results of 104 "problem" diabetics treated with...

fair to excellent control in 91 of 104 diabetics (88%)
...achieved with DBI use alone or combined with exogenous insulin.

"more useful and certainly more serene lives"...
In many diabetics "phenformin (DBI) has been responsible for adjusting life situations so that patients whose livelihood was threatened, whose peace of mind was disturbed because of lability of their diseases, have been restored to more useful and certainly more serene lives."

"no evidence of toxicity" due to DBI...
a relatively low incidence of gastrointestinal reactions...were found in this series.

DBI®

(brand of Phenformin HCl-N¹-phenethylbiguanide HCl) is available as 25 mg. white, scored tablets, bottles of 100 and 1000.

1. Barclay, P. L.: J.A.M.A. 174:474, Oct. 1, 1960.

Rely on DBI, alone or with insulin, to enable a maximum number of diabetics to enjoy continued convenience and comfort of oral therapy in the satisfactory regulation of...

stable adult diabetes • sulfonylurea failures unstable (brittle) diabetes

NOTE—before prescribing DBI the physician should be thoroughly familiar with general directions for its use, indications, dosage, possible side effects, precautions and contraindications, etc. Write for complete detailed literature.

u. s. vitamin & pharmaceutical corporation
Arlington-Funk Laboratories, division • 250 East 43rd Street, New York 17, N.Y.

attains
sustains
retains

extra
antibiotic
activity

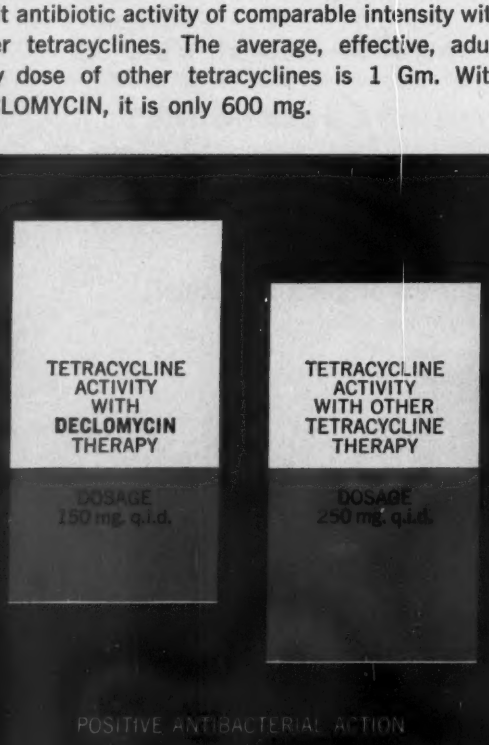
DECLOMYCIN

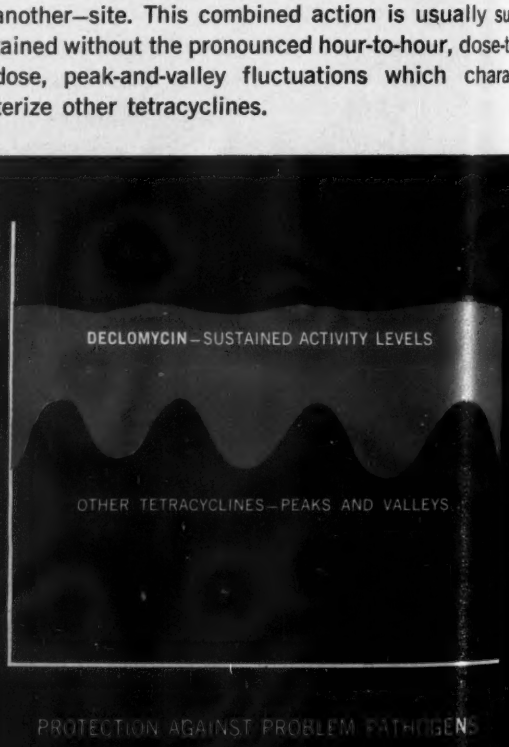
attains activity levels promptly

DECLOMYCIN Demethylchlortetracycline attains—usually within two hours—blood levels more than adequate to suppress susceptible pathogens—on daily dosages substantially lower than those required to elicit antibiotic activity of comparable intensity with other tetracyclines. The average, effective, adult daily dose of other tetracyclines is 1 Gm. With DECLOMYCIN, it is only 600 mg.

sustains activity levels evenly

DECLOMYCIN Demethylchlortetracycline sustains, through the entire therapeutic course, the high activity levels needed to control the primary infection and to check secondary infection at the original—or at another—site. This combined action is usually sustained without the pronounced hour-to-hour, dose-to-dose, peak-and-valley fluctuations which characterize other tetracyclines.


TETRACYCLINE ACTIVITY WITH DECLOMYCIN THERAPY
DOSAGE 150 mg. q.i.d.
TETRACYCLINE ACTIVITY WITH OTHER TETRACYCLINE THERAPY
DOSAGE 250 mg. q.i.d.
POSITIVE ANTIBACTERIAL ACTION



Arlington-Funk Laboratories, division • 250 East 43rd Street, New York 17, N.Y.

The
ILLINOIS
Medical Journal
Official Journal of The Illinois State Medical Society

MARCH, 1961
VOL. 119, No. 3

Eating Habits and "Metabolic" Diseases

CLARENCE COHN, M.D., *Chicago*

THE RATE of ingestion of the diet appears to play a significant role in the regulation of intermediary metabolism.[1] Experimental animals forced to consume their daily allotment of nutrients in the form of regularly spaced full meals (meal eaters) differ metabolically from animals eating the same amount of food in frequent small feedings (nibblers). Thus, the meal eater, as compared to the nibbler, exhibits: (a) increased body fat with normal body weight, (b) decreased body protein, (c) altered thyroid activity, and (d) increased hepatic and fatty tissue hexosemonophosphate shunt activity.

From these findings we concluded that the *rate* at which substrates become available must be considered as an additional factor in the influences that govern metabolic activities of cells. We feel that traffic over multiple alternate enzymatic pathways can be altered by changing the manner in which food is eaten; eating patterns seem to influence specific, hence ultimately total, metabolic reactions of an organism.

In the usual study of the interrelationships of fat, carbohydrate, and protein metabolism, attempts are made to achieve the so-called "steady state." For this purpose it has been the custom to control rigidly the quantity and quality of food intake to the neglect of the timing of food ingestion. All but forgotten is the fact that the animal kingdom may be divided into two general types with respect to the manner of food ingestion—the meal eaters and the nibblers. These patterns may be evolutionary vestiges related to the availability of food. Apart from the purely physiological phenomena attendant on eating habits, the consequences of meal eating, if any, should interest civilized man because of his custom of consuming spaced full meals.

With these thoughts in mind, and in view of the results presented above, two general questions occurred to us: (a) Does the manner of eating

Director, Department of Biochemistry, Medical Research Institute, Michael Reese Hospital and Medical Center, Chicago.

The investigations performed at Michael Reese were aided by grants-in-aid from the National Institute of Arthritis and Metabolic Diseases (A-193, C-7) and from the National Science Foundation (G-9992).

While the Nutrition Committee of the Chicago Heart Association is sponsoring this article, the opinions expressed are those of the author and do not necessarily represent the official view of that committee.

have an effect on the production and regression of experimental "metabolic" diseases? (b) How does man react to different eating habits? One might ask also whether experiments designed to explore the "metabolic" disases to which man is prone should not use the eating customs of man, i. e., the "unsteady" state or meal eating condition.

Our continuing studies have been addressed to answering these questions. The results have yielded information suggesting that the rate of ingestion of the diet *does* have an influence on experimental "metabolic" diseases and that man *does* react to eating habits as do other species. Experiments leading to these conclusions may be summarized as follows:

Experimental obesity: The laboratory rat, normally a nibbler, requires 24 hours to consume his ration of food. Force-feeding him his food twice daily converts him into a meal eater. Under the latter conditions, he deposits twice as much body fat but less body protein than does his nibbling control which has eaten the same amount of food and gained the same amount of body weight over the same period.

Experimental diabetes: Effects of manner of ingestion of the diet on the severity of experimental diabetes, one to two months after alloxanization, were studied in rats maintained on constant insulin dosage. In the first weekly period, the animals were permitted to eat *ad libitum:* their food intake and urinary glucose and nonprotein nitrogen excretion were measured daily. The rats were then adapted to force-feeding and fed daily the amount of food they had previously consumed *ad libitum.* Under these conditions, the animals excreted 215 per cent more glucose and 23 per cent more nonprotein nitrogen when meal eating.[2]

Experimental atherosclerosis: Chickens, like laboratory rats, are normally nibblers. By offering the birds food for an hour in the morning and an hour in the afternoon, they may be converted into meal eaters. In both types of eating patterns, the production and regression of experimental atherosclerosis were studied.[3] Meal eating, in induction experiments, was associated with a greater degree of hypercholesterolemia and seven times the incidence of coronary atherosclerosis. In regression studies, meal eating was accompanied by a slower rate of fall of experimentally elevated serum cholesterol levels and healing of established atherosclerotic lesions.

Thus it is possible to demonstrate that eating habits *do* effect the pathogenesis, severity, and regression of some representative experimental "metabolic" diseases.

Man's response to different rates of ingestion of the diet seems similar to that of the other animals studied. Fetuses are, in effect, being supplied by a constant stream of nutrients via the umbilical vessels; the newborn may be properly regarded as a nibbler. Custom, convenience, working conditions and other factors change the eating pattern to one of meal eating. To us it is unnecessary to speculate on man's "natural" eating habits. To do so is to miss the important facets of the problem: (a) *Does* man respond metabolically to the different rates of food consumption as do other species? (b) If man does so respond, *could* patterns of food ingestion play a role in the epidemiology and therapy of "metabolic" diseases? The data now available suggest an affirmative answer to both questions. Initial studies on nitrogen balance[4], thyroid function, and on serum cholesterol levels[5] in man have been performed. The results tend to reinforce our hypothesis that the response to the rate of food ingestion is a general biological phenomenon and that it influences the intermediary metabolism of man in a fashion similar to that of other species.

Assuming the preliminary data will be corroborated, civilized man might start considering means for changing his present eating habits. To accomplish this, diets capable of satisfying physiological and psychological needs must be devised. In addition, a large amount of basic and clinical research must be accomplished.

REFERENCES

1. Cohn, C., and Joseph, D.: Role of Rate of Ingestion of Diet on Regulation of Intermediary Metabolism ("Meal Eating" vs "Nibbling"), Metabolism 9:492, 1960.
2. Cohn, C., and Joseph, D.: Comparison of "Meal Eating" and "Nibbling" on Severity of Alloxan Diabetes, Proc. Soc. Exp. Biol. and Med. 105:575, 1960.
3. Cohn, C.; Pick, R., and Katz, L. N.: Effect of Meal Eating Compared to Nibbling upon Atherosclerosis in Chickens, Circ. Res. 9:139, 1961.
4. Wu, H., and Wu, D. Y.: Influence of Feeding Schedule on Nitrogen Utilization and Excretion, Proc. Soc. Exp. Biol. and Med. 74:78, 1950.
5. Hashim, S. A.; Arteaga, A., and Van Itallie, T. B.: Effect of a Saturated Medium-Chain Triglyceride on Serum-Lipids in Man, The Lancet, 1:1105, 1960.

Oral Antidiabetic Agents

A review of their pharmacology, mechanism of action, and clinical use

JOSEPH R. DAVIS, M.D., *Chicago*

ALTHOUGH THE DISCOVERY of insulin has provided a satisfactory means of substitution therapy for the control of diabetes, it has also introduced numerous problems for the diabetic patient. Such problems are mainly due to the parenteral route of administration of insulin and include painful injections, dependency upon others for injection of the drug, inconvenience of refrigeration and sterilization, and occasional cases of insulin shock and atrophy of the subcutaneous tissue at the site of injection. It was for these reasons that a long and continued search has been carried out for an oral hypoglycemic agent which would be devoid of the untoward reactions of insulin. The accidental finding in 1918 by Watanabe[1] that the subcutaneous injection of guanidine in rabbits caused a considerable hypoglycemic effect led German investigators in 1926[2] to introduce a diguanidine derivative known as "Synthalin" as an oral agent for diabetes. Although some degree of adequate control could be attained for the diabetic patient with "Synthalin," unfortunately, the drug was soon found to exert serious hepatotoxic and renotoxic effects which precluded its clinical use.

The first major break-through in the field of oral antidiabetic agents came in 1942 with the announcement by Janbon[3] at the Montpellier Clinic for Contagious Diseases in Southern France that a thiodiazole derivative of sulfanilamide, known as IPTD and originally prepared in Germany (1941)[4] resulted in severe neurologic symptoms in patients being treated for typhoid fever. These effects were faintness, dizziness, perspiration, tremor, and disorientation. Janbon correctly reasoned that this syndrome was closely analogous to the picture of hypoglycemic shock and indeed demonstrated an actual fall in the level of blood sugar. A physiologist at the Montpellier Clinic, Loubatieres, was quick to recognize the possible application of the sulfonamide derivatives in cases of diabetes and soon began a long series of publications on the mechanism of action of these compounds which have recently been summarized.[5] In 1954, interest in the aryl sulfonamides spread to Germany; there two new substances were prepared which were closely related to IPTD but lacked the thiodiazole nucleus.[6,7,8] These were carbutamide (BZ-55) and its methylated analogue tolbutamide (Orinase®). Soon after the introduction of these compounds, considerable interest was manifested in the United States for sulfonylurea derivatives of greater potency and duration of action having fewer side effects. A large number of p-chlorobenzene sulfonylureas were synthesized;[9] among these, chlorpropamide (Diabinese®) was found to be the most potent and longest acting compound. A recent departure from the class of aryl sulfonamide derivatives has been the reintroduction of the biguanides as oral antidiabetic agents[10], the most successful being phenethylbiguanide (DBI).

Sulfonylureas

Pharmacology. Tolbutamide and chlorpropamide are rapidly absorbed in the form of the sodium salt, and a maximal blood level is reached in about four hours. They distribute themselves equally in the extracellular fluid; very small amounts of the drug appear in both the bile and the cerebrospinal fluid. In the circulating blood, approximately 50-60 per cent of the drug is bound to protein.[11] Whereas both tolbutamide and chlorpropamide have a latent period of approximately one hour for their hypoglycemic effect, a maximal hypoglycemic response is obtained in five to eight hours with tolbutamide and in only two to four hours with chlorpropa-

From the department of pharmacology, University of Illinois College of Medicine.

mide. The half-life of the drug in the blood stream is three to four hours for tolbutamide and up to 48 hours for chlorpropamide. Whereas tolbutamide is carboxylated in the p-position to an inactive compound, the presence of chlorine in the p-position of chlorpropamide prevents the occurance of such a detoxication reaction.

Both the unchanged and metabolized forms of the sulfonylureas are excreted via the kidney, the time for excretion of 90 per cent of the drug being 48 and 96 hours for tolbutamide and chlorpropamide respectively. Crystalluria does not occur inasmuch as all forms of the drug are soluble in the urine over a wide pH range.[12] The fact that chlorpropamide attains its maximum hypoglycemic effect in a shorter time period, has a longer half-time in the blood, is not inactivated in the body, and is more slowly excreted in the urine indicates its greater activity as a hypoglycemic agent as compared with tolbutamide. Although closely related to the sulfonamides, neither tolbutamide nor chlorpropamide possess any antibacterial activity.

Mechanism of action. Many theories have been advanced to explain the mechanism of action of the hypoglycemic effect of the sulfonylurea compounds.[13,14] At first the sulfonylureas were thought to have the same mechanism of action as insulin. This has been shown not to be the case inasmuch as the sulfonylureas are completely inactive in producing a decrease in blood sugar when naturally-occuring insulin is absent. While insulin itself may elevate the levels of pyruvic and lactic acids in the blood, the sulfonylurea compounds are devoid of any such action. Moreand lactic acids in the blood, the sulfonylurea over, unlike insulin, the sulfonylurea drugs do not enhance the entrance of glucose into skeletal muscle cells as measured by the rate of glucose uptake into the isolated rat diaphragm.[15]

The second theory involves the inhibition by the sulfonylureas of the enzyme responsible for the proteolytic degradation of insulin. This enzyme has received the name insulinase, and after once being thought to be specific for insulin, has now been shown to possess proteolytic activity also toward corticotropin, somatotropin, casein, and glucagon.[16] If the sulfonylureas would inhibit insulinase, it would be expected that more insulin would be available to enhance the intracellular transport of glucose from the blood. The evidence in favor of this theory was based on the fact that the sulfonylureas produced hypoglycemia only in the presence of insulin originating from the pancreas or from exogenous administration. However, it has been exceedingly difficult to prove any inhibition of insulinase since both the measurement of blood levels of insulin and the isolation of the pure enzyme are at present very difficult. In addition, the levels of the sulfonylurea drugs necessary to inhibit crude preparations of insulinase *in vitro* are far in excess of their physiologic dose.[17]

A third theory for the hypoglycemic effect of the sulfonylureas is that these drugs may prevent the formation of glucose from hepatic glycogen, thereby decreasing the release of glucose from the liver cells into the blood. The evidence in favor of this theory is that following the administration of a sulfonylurea to fasted animals, a rapid increase in the hepatic glycogen content was noted.[18] Similarly, the sulfonylureas were found to stimulate the incorporation of radioactive glucose into liver glycogen of fasted animals.[19] It seemed of great interest that neither effect occurred with the hypoglycemic response to insulin. Unfortunately, these results are extremely difficult to interpret in view of the finding that these increases of hepatic glycogen with sulfonylurea administration could not be obtained in fed animals.[20]

A fourth hypothesis implies depression of the function of the alpha cells of the pancreas and assumes that insulin and glucagon are natural antagonists. Glucagon, secreted from the alpha cells of the pancreas, has long been known to be a pancreatic hyperglycemic factor. The observation that the administration of "Synthalin" and IPTD resulted in extensive damage to these alpha cells[21] indicated the possibility of a reduction of glucagon secretion which would augment the hypoglycemic effort of endogenous insulin. However, other investigators have had difficulty in confirming changes of the alpha cells in hypoglycemic states[22] as well as demonstrating any reduction in the extractable glucagon content of the pancreas of animals receiving sulfonylureas.[23]

The last explanation for the hypoglycemic response of the sulfonylureas is perhaps the best founded and most acceptable at the present time. It may be designated as the pancreatotropic effect of the sulfonylureas to stimulate the secre-

TABLE 1.—Comparison of Potency, Excretion, and Dosage of Oral Antidiabetic Drugs

Antidiabetic Drug	Hypoglycemic response			Half-life in blood	Total excretion time	Initial dose	Daily maintenance dose
	Latency	Maximum	Duration				
Tolbutamide	1 hr.	5-8 hrs.	12 hrs.	3-4 hrs.	48 hrs.	3.0 Gm.	0.5-1.5 Gm.
Chlorpropamide	1 hr.	2-4 hrs.	24 hrs.	48 hrs.	96 hrs.	0.25 Gm.	0.1-0.25 Gm.
Phenformin	1 hr.	5-6 hrs.	12 hrs.		24 hrs.	0.025 Gm.	0.05-0.15 Gm.

tion of endogenous insulin from the beta cells of the islets of Langerhans. This theory originated from the work of Loubatieres,[24] who found that in a depancreatized animal, IPTD had no hypoglycemic response, whereas in animals deprived of all but one-tenth of their pancreas IPTD invoked a marked decrease in blood sugar. These observations have been confirmed clinically in that the sulfonylureas are effective in cases of adult diabetics whose pancreas contains adequate amounts of insulin,[25] while having no hypoglycemic effect in either juvenile diabetics whose pancreas contains little or no insulin[26] or in patients whose diabetes is a result of surgical pancreatectomy for pancreatic carcinoma. Moreover, not only do the granules of the beta cells of the pancreas disappear after the administration of a sulfonylurea drug but the amount of extractable insulin of the pancreas is also reduced.[27] It would appear that a major mode of action of the oral sulfonylurea hypoglycemic agents involves the stimulation and release of preformed insulin from the pancreas.

Clinical use. It is of great importance to keep in mind that only selected cases of diabetes are applicable to oral therapy. The clinical indication for sulfonylurea therapy is adult diabetes uncomplicated by acidosis, coma, ketosis, fever, trauma, or surgical procedures. Oral therapy has proved of value in 80 per cent of those patients who have developed diabetes after the age of 40 years.[28]

The contraindications to the sulfonylurea drugs include "juvenile" diabetics who contracted the disease before the age of 20 years, cases of "brittle" adult diabetes, and cases of diabetes adequately controlled by dietary restrictions.[29] During an intercurrent complication the oral sulfonylureas should be withdrawn and insulin therapy substituted for the duration of the complication. It is for this reason that all patients on oral therapy should also be instructed on the proper use of insulin. Moreover, the patient on oral therapy must be instructed not to neglect his dietary restrictions and must be familiarized with the detection and correction of impending hypoglycemia.

Institution of oral sulfonylurea therapy is accomplished by the following suggested dosage schedule. The initial dose of tolbutamide is 3 Gm. on the first day, followed by 2 Gm. on the second day and 1 Gm. on the third and each subsequent day. The initial dose of chlorpropamide is 250 mg. daily with the usual daily maintenance dose being 100-250 mg.

A gradual withdrawal of insulin during the first few days of oral therapy is recommended for both tolbutamide and chlorpropamide. During the withdrawal period a constant check on the urine must be made. The incidence of side effects with either tolbutamide and chlorpropamide is almost negligible and when occurring are almost all of a nonserious nature. The most common include nausea and headache as well as mild allergic skin reactions. Although a 0.4 per cent incidence of jaundice has been reported for chlorpropamide, reversal can be accomplished by the prompt discontinuation of the drug. Moreover, the chronic administration of chlorpropamide to a variety of experimental animals in doses up to twenty times larger than the recommended human dose has resulted in no gross anatomic or histopathologic changes.[30] Unlike insulin, hypoglycemia accompanied by coma is virtually unknown with the oral sulfonylurea agents.

Guanidine derivatives

The first guanidine derivatives to be employed as oral therapy for diabetes, and indeed the first of any oral hypoglycemic agent to be of clinical use, were the alkylated diguanidines Synthalin "A" and "B". Synthalin "A", decamethylenediguanidine, and Synthalin "B", dodecamethyl-

enediguanidine, introduced in Germany in 1926,[2] were used for several years in the treatment of mild to moderate cases of diabetes. Recently, interest has been manifested in biguanides, of which the best known is phenformin (DBI).

Mechanism of action. Reports that "Synthalin" was capable of reducing the blood sugar in completely depancreatised animals have indicated that unlike the sulfonylureas, the guanidine derivatives have an extra-pancreatic site of action.[31] Similarly, DBI produces a hypoglycemic response in animals without a pancreas. Moreover, in contrast to the sulfonylureas, DBI increases the uptake of glucose into the isolated rat diaphragm.[32] However, the exact extra-pancreatic site of action is not known. Numerous theories have been offered and include at the present time such concepts as enhancement of anaerobic glycolysis in peripheral muscle,[33] inhibition of hepatic gluconeogenesis,[34] and inhibition of respiratory enzymes.[32]

Clinical use. DBI has been reported not only to be of therapeutic use in cases of adult diabetes, but also to be of value in cases of "juvenile" diabetes.[35] The insulin requirement for "juvenile" diabetics may be decreased as much as 50 per cent. Still another use for DBI has been in cases of sulfonylurea failures. It seems apparent that although each dosage of DBI should be individualized, low doses should be employed initially, with gradual increases over a period of time until a daily maintenance dose not exceeding 150 mg. is attained. Like the sulfonylureas, DBI is contraindicated in the acute complications of diabetes. The side effects of DBI are related to the gastrointestinal tract and include anorexia, nausea, vomiting, and occasional diarrhea. Although these symptoms may be sufficiently severe to discontinue therapy in a small number of patients, they usually disappear upon reduction of the dosage of the drug.

REFERENCES

1. Watanabe, C. K.: J. Biol. Chem. 33:253 (1918).
2. Frank, E. Nothmann, M., and Wagner, A.: Klin. Wchnschr. 5:2100 (1926).
3. Janbon, M., Lazuerges, P., and Metropolitanski, J. M.: Presse méd. 51:37 (1943).
4. Vonkennel, J., and Kimmig, J.: Klin. Wchnschr. 20:2 (1941).
5. Loubatieres, A.: Presse méd. 63:1701 (1955).
6. Franke, H., and Fuchs, J.: Deutsche med. Wchnschr. 80:1449 (1955).
7. Achelis, J. D., and Hardbeck, K.: Deutsche med. Wchnschr. 80:1452 (1955).
8. Maske, H.: Deutsche med. Wchnschr. 81:823 (1956).
9. McLamore, W. M., Fanelli, G. M., P'an, S. Y., and Laubach, G. D.: Ann. N. Y. Acad. Sci. 74:443 (1959).
10. Krall, L. P.: Ann. N. Y. Acad. Sci. 82:603-13 (1959).
11. Stowers, J. M., Hunter, R. B., and Constable, L. W.: Ann. N. Y. Acad. Sci. 74:688 (1959).
12. Toolan, T. J., and Wagner, R. L.: Ann. N. Y. Acad. Sci. 74:449 (1959).
13. Levine, R., and Sobel, G. W.: Diabetes 6:263 (1957).
14. Duncan, L. J. P., and Baird, J. D.: Pharm. Rev. 12:91 1960.
15. Cahill, G. F., Hastings, A. B., and Ashmore, J.: Diabetes 6:26 (1957).
16. Williams, R. H.: Diabetes 6:25 (1957).
17. Williams, R. H., and Tucker, B. W.: Metabolism 5:801 (1956).
18. Fry, I. K., and Wright, P. H.: Brit. J. Pharmacol. 12:350 (1957).
19. Miller W. L., Krake, J. J., and Vander Brook, M. J.: J. Pharmacol. 119:513 (1957).
20. Tyberghein, J. M., Halsey, Y. D., and Williams, R. H.: Proc. Soc. Exp. Biol., N. Y. 92:322 (1956).
21. Holt, C. von, Holt, L. von, Kroner, B., and Kühnau, J.: Arch. exper. Path. u. Pharmak. 224:66 (1955).
22. Volk, B. W., Weisenfeld, S., Lazarus, S. S., and Goldner, M. G.: Metabolism 5:894 (1956).
23. Berthet, J., Sutherland, E. W., and Makman, M.: Metabolism 5:768 (1956).
24. Loubatieres, A.: Ann. N. Y. Acad. Sci. 71:4 (1957).
25. Beaser, S. B.: Metabolism 5:933 (1956).
26. Wrenshall, G. A., and Best, C. H.: Canad. M. A. J. 74: 968 (1956).
27. Root, M. A.: Diabetes 6:12 (1957).
28. Sherry, S., Zeffren, J. L., Braverman, A. E., and Drey, N. W.: Ann. N. Y. Acad. Sci. 71:249 (1957).
29. Dolger, H.: Ann. N. Y. Acad. Sci. 71:275 (1957).
30. Schneider, J. A., Salgado, E. D., Jaeger, D., and Delahunt, C.: Ann. N. Y. Acad. Sci. 74:427 (1959).
31. Read, W. O., and Fodden, J. H.: Metabolism 3:456 (1954).
32. Steiner, D. F., and Williams, R. H.: Biochim. biophys. Acta. 30:329 (1958).
33. Williams, R. H., Tyberghein, J. H., Hyde, P. M., and Nielsen, R. L.: Metabolism 6:311 (1957).
34. Williams, R. H., Tanner, D. C., and Odell, W. D.: Diabetes 7:87 (1958).
35. Krall, L. P., and Camerini-Davalos, R.: A.M.A. Arch. Int. Med. 102:25 (1958).

Coming . . .

Annual Meeting Program

in the April Journal

Occupational Diseases of the Skin Among the Farmers of Illinois —

A Symposium

HANS M. BULEY, M.D., *Champaign,* Chairman;
GEORGE DICKISON, M.D., *Peoria;* and
MALCOLM SPENCER, M.D., *Danville*

CHAIRMAN'S INTRODUCTION

DURING the past three decades industrial medicine has made many important advances in recognizing the causal relationships between certain occupations and disease and in the prevention of occupational hazards. Little attention, however, has been paid to the occupational injuries and diseases among the farmers, particularly to the dermatoses associated with their work.

The reasons for this lack may readily be seen. The majority of the great industrial plants was concentrated in and around the major metropolitan areas where specialists in the field of occupational medicine were easily available. Both industrial management and labor were interested in limiting occupational hazards among their workers for reasons of mutual benefit. Because of this, large funds were made available to conduct extensive studies in this field. Contrariwise, the farming population was spread out over vast rural areas. Disease and accident on the farm remained a private problem between the patient and the family doctor, and therefore, only scattered attempts were made to protect the farmer against the hazards of his trade particularly from the dermatologic point of view.

However, as one becomes aware of the rapidly growing industrialization of agriculture due to modern intensive farming techniques, the constantly progressive mechanization of equipment, the use of many new synthetic chemicals, such as fertilizers, preparations for the treatment of seed, compounds added to the feed, insecticides, weed killers, cleansing agents and others, one realizes that the farmer is at least as much exposed to the possibility of occupational disease as the industrial laborer. Indeed, from an economic viewpoint, such disease or injury may be more disastrous, because a farmer cannot as easily be replaced in his job as an industrial worker, and oftentimes he cannot afford — not even for reasons of health — to interrupt his seasonal work at a critical time of the year, lest he lose a large portion of his year's earning.

The physician who practices in a farming area is very much conscious of this situation and has to deal with its problems constantly, at times with a great amount of frustration and exasperation. In no field of medical endeavor, therefore, should the value of prevention be rated more highly than in that of occupational diseases among the farmers.

*Presented before the Dermatological Section of the Illinois State Medical Society, Chicago, May 26, 1960.

The Climatic Dermatoses

HANS M. BULEY, M.D., *Champaign*

THE CLIMATIC dermatoses may be defined as diseases resulting from a lack of adaptation of a healthy person's skin to the weather. If one defines "weather" as the sum total of atmospheric conditions or changes — including temperature and pressure, wind velocity and direction, humidity, cloudiness, and precipitation of rain, snow or hail, atmospheric ionization, and the amount of solar radiation and its components — one becomes aware of the complexity of the problem in question. Although the literature dealing with certain phases of the problem, such

as the effect of ultraviolet rays on the skin, is extensive, the actual knowledge of the subject as a whole is still fragmentary. One must be cautious, therefore, in the interpretation of observations, and one should avoid the customary loose usage of "wind and weather" as an explanation for certain clinical phenomena.

In discussing the occupational character of the dermatoses due to the climate, I will include only the damage of the healthy skin due to cold, to heat and humidity, and to solar radiation.

Among the dermatoses caused by the influence of *cold*, we distinguish between the acute forms of true cold damage, called "frost-bite," and the more chronic conditions, the "chilblains" or "perniones," and "trenchfoot." Chilblains and trenchfoot are extremely rare among the farmers of Illinois, partly because the winter work on the farm is usually limited to jobs performed in the barn or other farm buildings, and partly because the well-fed and warmly-clothed farmers are sufficiently protected against such disease. Acute frost-bite, however, will occur, though usually to a minor degree, on face, ears, hands, and feet, after occasional work in extreme cold and wind. Usually the area of involvement shows a diffuse erythema, which even after return of the patient to an environment of moderate temperature persists in a form of a passive hyperemia, often associated with marked burning or itching. A moderate hypersensitivity to temperature changes may remain. A more severe frost damage with vesiculation and necrosis may occur under special circumstances, of course, but such conditions are certainly not common as occupational injuries on the farm and may, therefore, be passed by here.

Much more disturbing and less avoidable are the summer dematoses resulting from the extreme *heat* and *humidity*, which are so typical of the climate of Illinois during the busy months of field cultivation and harvest. As a physiologic response to the rise in body temperature, the rate of sweat production increases and the composition of the sweat changes. Aside from infections, the appearance of "miliaria rubra" or "prickly heat" is a common occurrence. This eruption consists of numerous pinhead-sized maculopapular, or, at times, vesiculopustular erythemas surrounding the sweat pores. The areas of predilection are the trunk and the extremities, especially where the clothes fit tightly, as in the axillae, the groins and around the waist. The rash is of no serious consequence, except that it may cause intense itching which disturbs the few hours of sleep a farmer is able to get during the periods of highest farming activity. Scratching of the eruption also furthers the ever present danger of infection, and occasionally furunculosis or an extensive disabling intertriginous dermatitis may complicate the primarily innocuous dermatosis.

Preventive measures against miliaria are easy to apply. Miliaria-prone individuals should wear light, sweat-absorbent, and loosely-fitting clothing which allows for sufficient ventilation of the skin, and which should be changed often. The same modalities used for the treatment of miliaria rubra may be used prophylactically, such as frequent cool baths, drying antiseptic dusting powders, or drying lotions.

"Farmers' skin" and senile dermatoses

By far the most common, and unfortunately the most ignored, truly occupational dermatosis among the farmers is the condition traditionally referred to as *"farmers' skin."* It is so common that most farmers accept it as normal and pay no special attention to it. Essentially, "farmers' skin" is an epidermal atrophy associated with certain changes in the upper level of the corium. It occurs on the exposed areas of the body. Not infrequently it can also be found on the shoulders and upper back, when these areas have been subject to repeated sunburns. In the early stages of the disease, a diffuse redness of the skin, telangiectases, and pigment irregularities are the only signs. Later on, a peculiar whitish-yellow mottling of varying degree becomes noticeable and gives the skin a variegated or marbled appearance, until finally, in advanced cases, a spotty waxy discoloration can be observed. While on the nose and the cheeks the skin is somewhat thinned and stretched, the temples and posterior neck may show a marked thickening of the skin with coarse wrinkles and deep folds (cutis rhomboidalis nuchae). The forehead, however, which is usually in the shadow of the hat or cap, shows characteristically a perfectly normal skin.

Sooner or later in the life of the patient with "farmers' skin" fairly well defined, slightly scaling red patches of varying size and shape develop. These lesions are traditionally referred to as

"senile keratoses" but the terms "actinic" or "solar" keratoses are much more appropriate inasmuch as the lesions may develop as early as in the twenties or thirties. On the face the scaling on these keratoses is usually not conspicuous or may be absent; but on the neck and on the extensor surfaces of the arms and hands, thick, adherent, horny scabs may form. At times an underlying inflammatory infiltrate may give these lesions a papular appearance and a firm consistency that renders them clinically indistinguishable from early cutaneous carcinoma.

The older textbooks of dermatology, in describing "farmers' skin," followed the popular concept of explaining the dermatosis as a part of the aging process of the skin "under the influence of wind and weather." Modern clinical and histologic investigations, however, have shown convincingly that the aging of the skin and the changes of "farmers' skin" are basically different and should be clearly distinguished from each other. Obviously, since the change of "farmers' skin" take place only in areas of sun-exposed skin, the physiologic process of aging as such cannot be its cause. Indeed, many farmers who develop the dermatosis in their prime of life would consider it absurd and ridiculous to hear that the condition of their skin is a sign of senility.

The decisive pathogenetic factor is not the patient's age, but the amount of pigment present in his epidermis and its ability to darken. Negroes do not develop the dermatosis at all. Swarthy individuals rarely do, but the fair and blue-eyed persons who sunburn easily are certain candidates for the disease. To complete the evidence in favor of the case for solar radiation being the cause of "farmers' skin," there is evidence that in the lower latitudes people with poor tanning ability show it at an earlier age and more fully developed than in the regions farther north.

The results of scientific investigations with the ultraviolet portion of the solar spectrum (about 2,800 to 3,200 Angstrom units) confirm our clinical impression concerning the effect of solar radiation on the skin. Whatever influence, if any, other meteorological energies have, is still unknown at the present time.

Following repeated and prolonged exposures to the sun, which are inherent in farming, degenerative changes at the subpapillary level of the cutis take place. These changes have gained increasing attention in recent years with regard to the pathogenesis of solar damage and its complications. The thickened epidermis and increased pigmentation which result from ultraviolet exposure absorb a large portion of the rays, act as a self-protective mechanism. A fraction of the ultraviolet, however, estimated to be 1 to 10 per cent of the total, does reach the cutis and causes a response at the subpapillary vascular plexus. The collagenous fibers surrounding the vessels begin to swell, become increasingly curled and twisted, and their histologic staining qualities gradually change to a basophilic pattern. Finally, in the fully developed dermatosis, a matted layer of amorphous material is spread throughout the sub-epidermal region. In modern histologic terminology this state is described as "actinic" or "solar" elastosis.

Treatment and prevention

It is logical, then, to assume that the epidermis, which depends on the underlying cutis for its nutrition, eventually suffers because of this sub-epidermal elastosis, becomes atrophic, and the process of regeneration and keratinization may be disturbed. The result is atrophy, the formation of dyskeratotic patches, which are the clinically observed "solar keratoses," and oftentimes malignant degeneration of the epidermal cells. Solar elastosis and epidermal atrophy are irreversible changes, and no effective treatment for them is known. Nor is there any known modality which prevents solar keratoses and cancer on skin damaged by solar action, except perhaps the avoidance of additional sunburning.

Were it not for the precancerous quality of "farmers' skin" the dermatosis would be of interest only to the student of skin diseases. The frequent occurrence of cutaneous carcinoma, however, on the terrain of solar damage should attract the attention of all physicians, particularly those practicing in the rural areas. Fortunately, skin cancer can be diagnosed early, and thanks to the extensive propaganda campaign against cancer in recent years, the rural population is sufficiently educated to consult the physician as soon as abnormal changes in the skin are noticed. The majority of the lesions, therefore, receive treatment at an early stage, and hence, the therapeutic results are excellent.

Preventive measures, of course, are all impor-

tant. But how, one may ask, can one hope to prevent solar damage to the skin of a person whose job demands his presence out in the open with exposure to the sun from the earliest spring to the late fall? It seems to be an impossible task. Nevertheless, there are a few things which can be done. Foremost is the education of the farming population to the dangers of solar radiation, a point which is still understood by all too few. Next, adequate protection from the sun, especially during the midday hours, may be sought in the form of light clothing coverage, including the arms and neck, and the wearing of a large hat. Cumbersome and inconvenient though these garments may be to the farmer riding a tractor or a combine on a windy or hot day, they will serve their purpose well. Frequently umbrellas and awnings are now used on tractors and other farm machinery. Protective creams and lotions, if applied to exposed areas before work, are valuable preventive agents, especially in spring before the skin has a chance to develop its own protection. If fashion and personal vanity will ever permit, a handsome beard could provide a great deal of natural protection to its wearer's face and neck. Finally, the antimalarial drugs, which reduce sensitivity to the burning ultraviolet rays, or the psoralens, which stimulate pigmentation and cause melanin retention in the epidermis, promise to become effective prophylactic agents. Provided that future observation on a large number of patients prove these drugs safe when taken over long periods of time, oral prophylaxis might eventually solve the problem of solar damage to the skin among the farmers.

REFERENCES

1. Occupational Health on the Farm, Indust. Med. 24:110-121, 1955.
2. Hall, A. F.: Relationships of Sunlight, Complexion and Heredity to Skin Carcinogenesis, A.M.A. Arch. Dermat. & Syph. 61:589-610, 1950.
3. Mackie, B. S., and McGovern, V. J.: The Mechanism of Solar Carcinogenesis, A.M.A. Arch. Dermat. 78:218-244, 1958.
4. Lund, H. Z., and Sommerville, R. L.: Basophilic Degeneration of the Cutis, Am. J. Clin. Path. 27:183-190, 1957.
5. Hopkins, C. E.: Psoralen Prophylaxis against Skin Cancer: Progress of Field Trials, J. Invest. Dermat. 32:383-386, 1959.
6. Becker, S. W., Jr.: Histologic Changes in Human Skin Folowing Psoralen Therapy, J. Invest. Dermat. 32:263-267, 1959.
7. Stegmaier, O. C.: Methoxsalen and Sun Tanning: A Blind Study, A.M.A. Arch. Dermat. 79:148-149, 1959.

Cutaneous Infections

GEORGE J. DICKISON, M.D., *Peoria*

CERTAIN INFECTIONS of the skin occur with greater frequency in farmers and farm workers than in the general population. These infections usually result from contact with infected animals. The incidence of some infections, such as bovine tuberculosis, anthrax, glanders, and brucellosis, has greatly diminished during the past 30 years. This has been achieved by extensive testing, rigid control, and destruction of all infected animals. The more common infections will be discussed here. A brief description of the disease, its etiology, diagnosis, and treatment will be covered.

The most common animal infection which produces skin disease in man is animal ringworm. Tinea capitis, tinea corporis, and tinea barbae can all result from an infection with one of the dermatophytes from animal contact.

Tinea capitis can be caused by various species of fungi: *Microsporum canis, Microsporum gypseum, Trichophyton mentagrophytes,* and *Trichophyton verrucosum.* As a rule zoophilic fungi produce more inflammatory lesions than do the fungi which naturally occur in man.

An exception to this rule is sometimes seen in tinea capitis caused by *Microsporum canis.* In this instance the infection can be indistinguishable from those due to *Microsporum audouini* in terms of the clinical features, direct microscopic findings in the hair, and fluorescence. *M. canis* usually comes from an infected kitten, although puppies, cows, horses, and sheep can also be the source.

M. gypseum infections are uncommon; but when they occur they are characterized by marked inflammation and the formation of a kerion, a boggy granulomatous, tumor-like lesion with much pus. This organism occurs in the soil as a saphrophyte.

Trichophyton mentagrophytes causes severe infections of the skin, scalp, and beard. It occurs in cattle, horses, and cats; it can also be isolated from the soil. The zoophilic strain causes very severe infections and is apparently a different strain from the one which causes human tinea pedis.

Tinea barbae or ringworm infection of the beard is the result of *T. mentagrophytes* and *T.*

verrucosum. This latter fungus comes from infected cattle and feeder calves.

Tinea corporis can be produced by any of the above fungi; the lesion is usually markedly inflammatory as in the scalp and beard. Diagnosis rests on demonstration of fungus spores or hyphae in the infected hair, pus, or skin and by culturing the fungus on special media.

The Wood's light is of use in the diagnosis of *Microsporum canis* infections since the infected hairs have a characteristic greenish fluorescence just as they have in the human ringworm of the scalp. Other types of tinea capitis do not have a characteristic fluorescence.

Treatment includes soothing, warm compresses if there is much inflammation and kerion formation. Systemic antibiotic therapy is indicated if much suppuration is present. All infected hairs should be gently epilated. When the acute inflammation has subsided, a mild fungicidal ointment, such as 3% sulphur is used. Griseofulvin®, 500 mg., twice daily, can also be given although it has been my impression that the course will not be greatly shortened.

Dairy workers who have their hands wet a great deal of time in the course of washing the cows udders and the milking equipment are susceptible to *Candida albicans* infections of the hands and paronychial regions. Microscopic examination of infected material is usually negative, and cultures are necessary for diagnosis. Treatment consists of topical Mycostatin®. Gentian violet is on occasion still helpful. Oral Mycostatin is of no value because it is not absorbed from the intestinal tract. Keeping the hands dry is of prime importance in effecting a cure and preventing a recurrence.

Deeper fungal infections also occur in farmers, for example, sporotrichosis, actinomycosis, and nocardiosis. The most common form of sporotrichosis is the lymphatic characterized by a group of subcutaneous nodules and ulcerations extending along a lymphatic channel. Treatment consists of saturated potassium iodide solution, 10 to 30 drops, three times daily. Improvement occurs in about two weeks, and medication should be continued for a month after all lesions have healed. A course of therapy will usually last three months.

Erysipeloid is essentially an occupational disease of people who incur abrasions while handling infected organic material. It is seen in farmers who do their own butchering and also in farm women who cut their hands while dressing poultry. It is also encountered in veterinarians who have had contact with infected swine. The causative organism is *Erysipelothrix rhusiopathiae,* which will survive for months in the soil or decomposed organic material. The disease has three forms:

1. The most common—a localized cutaneous form lacking constitutional symptoms.
2. A generalized eruption with mild symptoms.
3. A rare systemic form with endocarditis.

The common cutaneous form usually occurs on the hands and is characterized by vivid inflammatory marginated lesions with central clearing. It looks like erysipelas, but the patient is not sick. Penicillin is very specific and curative.

There is a pox-like disease of the cow's udder which can be transmitted to man, causing milker's nodules. This is almost unknown to city physicians, but farmers and veterinarians are usually familiar with it. The disease is acquired from an infected cow and is due to the paravaccinia virus. There are usually just a few lesions on the fingers. They reach their maximum size in two weeks and form a firm purple nodule. The center may umbilicate. The lesion does not become painful nor pustular, thus differentiating it from cowpox. No treatment is necessary as the lesions heal spontaneously in several weeks. There is no cross immunity with vaccina. With modern methods of machine milking and rigid inspection of cows, the incidence of this disease has become quite low.

Another rather rare condition is orf. This is primarily a viral infection of sheep and occurs as a vesicular eruption of the mouth and lips. In man it occurs in the form of inflammatory vesicles and pustules and usually is found on the hands. Spontaneous healing occurs within three weeks. There is little systemic reaction or regional adenopathy in spite of the rather severe appearance.

REFERENCES

1. Pillsbury, D. M., Shelley, W. B., and Kligman, A. M. Dermatology. Philadelphia, W. B. Saunders Co., 1956.
2. Schwartz, L., Tulipan, L., and Birmingham, D. J. Occupational Diseases of the Skin. Philadelphia, Lea & Febiger, 1957.

Occupational Dermatitis and Eczema Among Farmers

MALCOLM C. SPENCER, M.D., *Danville*

WITH THE ADOPTION of modern farming methods, the occupational hazards of the farmer have increased. Automation and the widespread use of chemicals have added tremendously to the already formidable list of naturally occurring potential allergens to which he is exposed (Tables 1 and 2).

Despite this increase in contactents, the incidence of truly allergic reactions remains surprisingly low. The problems of occupational dermatitis seen most often remain chiefly those recognized for many years. Only an occasional case is due to sensitization to the newer group of contactents. Table 3 summarizes cases in present study.

TABLE 1.—COMMON WEED SENSITIZERS INDIGENOUS TO ILLINOIS

Burdock	Pigweed	Wild Carrot
Cocklebur	Poison Ivy	Wild Garlic
Dogfennel	Primrose	Wild Geranium
Goldenrod	Ragweed	Wild Morning Glory
Jimson Weed	Redtop	Wild Parsnip
	Smartweed	

This listing taken in part from *Just Weeds*, E. R. Spencer, Charles Scribner's Sons, 1957, and Hugh Graham, Inc., Allergic Laboratories, Dallas, Texas.

TABLE 2.—CHEMICAL OCCUPATIONAL HAZARDS IN GRAIN FARMING

FERTILIZERS
Nitrates, Phosphates, Potash (variable proportions).
INSECTICIDES
DDT, Lindane, Aldrin, BHC, Dieldrin, Endrin, Heptachlor, Toxaphene, Malathion, Methoxychlor, Phosdrin, Parathion, Rotenone, Rotenone-sulfur.
FUMIGANTS
DDT, Methoxchlor, Ethylene dichloride, Carbon disulfide, CCl_4.
PRE-EMERGENCE HERBICIDES
Falone 2,4, Randox, Simazine, Amiben, Randox-T, Antrazine, Alanap.
POST-EMERGENCE HERBICIDES
2-4-D

This listing based on various bulletins of the Extension Service in Agriculture and Home Economics, University of Illinois, College of Agriculture, Urbana.

Associate professor of dermatology, Northwestern University School of Medicine.

TABLE 3.—OCCUPATIONAL DERMATITIS AMONG FARMERS BASED ON A REVIEW OF 2851 CURRENT OFFICE RECORDS

Source	No. of Cases
Ragweed	10 (1 atopic)
Weed Killer	4
Fertilizer	1
Insecticides	1
Seed Treatment	2
Cattle	3
Other Weeds	1
Miscellaneous (cement, chrominum, leather, soap, etc.)	9
	31

Poison ivy

Poison ivy dermatitis continues to be the most frequently seen allergic contact reaction. There is, however, little difference in the incidence in urban and rural areas. It is not the occupational hazard in farmers that one might expect it to be. Most of the cases seen are in children or young adults, whether living on the farm or in town. It is unusual to see it as a recurrent problem interferring with a farmer's work. When it does occur to this degree, a short course of corticosteroids will result in a dramatic recovery. It has not been necessary, in my experience, to use extracts as a means of desensitization. However, this is not true in children or young adults, who seem to obtain benefit with prophylactic desensitization in selected cases. The extracts should never be used as treatment during the acute phase.

Ragweed dermatitis

Ragweed dermatitis, while much less frequent than poison ivy, is the most important occupational dermatitis seen in farmers in my practice. This is not a self-limited eruption. Its course is one of persistent activity, usually in such a degree as to interfere appreciably with the victim's occupation. It is seen in two forms.

As a pollen inhalent, the protein fraction can occasionally cause an atopic dermatitis with typi-

cal distribution on the neck, eyelids, and anticubital fossae. The scratch and intradermal tests are positive in these cases, but the patch test to the oleoresin is negative. This particular form is rare in this area but is reported to be not infrequent in California.[1]

Ragweed dermatitis in this area is caused by sensitization to the ragweed oil — the so-called oleoresin or the alcohol-ether soluble fraction of the plant.[2] It usually appears towards the end of the ragweed season but generally persists many weeks, even months, after frost with frequent unexplained exacerbations. The open type of patch test may be negative. If this occurs, a closed patch test to the oleoresin should be performed. Cross sensitization to chrysanthemum, turpentine, and tobacco has been proposed as an explanation for the marked chronicity of this eruption.[3] In my experience, however, this cross sensitization has not been observed on repeated patch testing. The most likely reason for continued activity is that exposure inadvertently occurs from grains and feeds contaminated with the ragweed. Another interesting feature of ragweed dermatitis is that it appears for the first time in the 40 years or older age group (Fig. 1). Table 4 compares salient features of ragweed dermatitis, poison ivy, and polymorphous light eruptions.

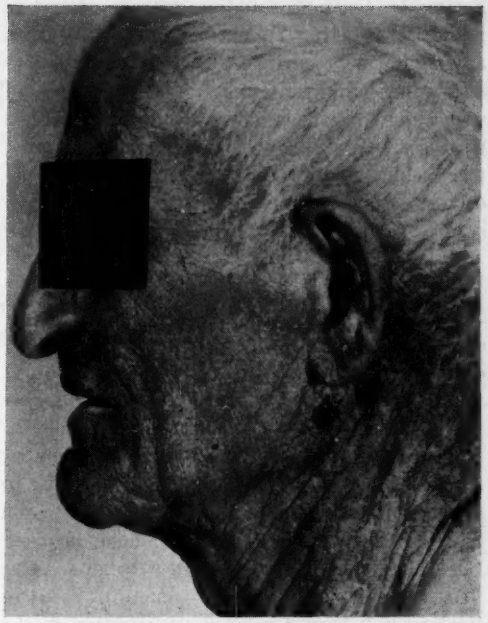


Figure 1. Ragweed dermatitis. Indurated erythema with secondary eczematization.

Milker's eczema

I agree with Epstein that while this is a clinical entity, it is most likely an atopic dermatitis due to sensitivity to cattle. In the characteristic form, as described by Epstein,[4] the eczema involves the thumb and index finger of the right hand and extends to the radial aspect of the wrist. Later on, the left hand is similarly involved but less severely so.

In some instances there is an associated dermatitis of the anticubital areas and of the eyelids or face. An acute form due to weeds has been described.[4] However, in contrast to ragweed contact dermatitis, Milker's eczema first appears in persons 20 to 40 years of age.

In support of Epsteins' argument that this is a clinical entity, the connection with milking or contact with cattle is often apparent to the patient. For example, the three patients in the present group had definitely associated their trouble with contact to cattle before seeking help. However, while hand involvement was present in two, one of these had noticed initially, an anticubital dermatitis which he felt was the result of cleaning milking utensils and the cows' udders. He has been able to get along fairly well, despite

TABLE 4.—Salient Features of 3 Dermatoses Among Farmers

Features	Ragweed	Polymorphous Light	Poison Ivy
Age of Onset	40 or older	Adult	Child
Sex	Male	Both	Both
Initial Episode	Fall	Spring	Spring
Distribution	Face & Arms	Exposed Surfaces	Areas of Contact
The Eruption	Indurated Erythema	Polymorphous	Typical & Atypical
Duration	Chronic	Clearing after frost	Self-limited
Complications	Common	Occasional	Frequent

having to continue milking, with a protective regime and taking an antihistamine. But with any significant recurrence, local steroids are necessary for symptomatic relief. The second patient with hand involvement developed dermatitis after getting a single milk cow. His dermatitis cleared after selling his cow. The third patient had periorbital dermatitis, recurrent with minimal exposure to cattle.

Discussion

In 1953, I presented an exhibit at the American Academy of Dermatology and Syphilology entitled *Dermatology R.F.D.* In this exhibit, it was pointed out that certain cutaneous manifestations are seen with much greater frequency in rural than in urban areas. As part of the preparation for this presentation, it was interesting to review this exhibit with special reference to the cases of occupational dermatitis among farmers. For example, a swine herdsman with an eczematous contact dermatitis to penicillin used in treating sick hogs developed sensitization to the antibiotic. It is the only case I have seen and recognized. Yet antibiotics such as penicillin, streptomycin, and neomycin with well recognized indices of sensitization are being used with increasing frequency by farmers in the treatment of animals. A man with severe dermatitis to corn (patch test positive) required hospitalization on three occasions for symptomatic treatment. He was later found to have a leather sensitivity. The eruption cleared completely when he avoided wearing leather shoes. Finally, a soil conservation employee had weed dermatitis. It began in the early summer and was characterized by repeated bouts of periorbital dermatitis. He has since had minimal difficulty by taking repeated courses of poison ivy extract.

Thus, it must be realized that frequently it is necessary to change one's concept of the role of suspected allergens in cases of chronic and recurrent occupational dermatitis. The continued study of the patient with a persistent occupational dermatitis, in addition to symptomatic therapy, is likely to result in a significant revelation that will be most gratifying.

REFERENCES

1. Epstein, S.: Occupational Dermatoses Among Farmers, Postgrad. Med. In publication.
2. Fromer, J. L., and Burrage, W. S.: Ragweed Oil Dermatitis, J. Allergy 24:425, 1953.
3. Perry, D. Personal communication.
4. Epstein, S.: Milker's Eczema, J. Allergy 19:331, 1948.

Symbols of medical practice

You all remember the "Gold-Headed Cane" that was carried by the leading London practitioners in the seventeenth and eighteenth centuries as a symbol of their knowledge, authority, success, and elegance. These men had prestige, but they were artists, not scientists, although they were patrons of science. But as Dana Atchley pointed out: "The art of medicine (at that time) was so devoid of scientific knowledge that pomp and ceremony were highly useful therapeutic adjuncts."

There was also a symbol for the outstanding country practitioner who drove a horse and buggy from house to house to care for his patients, and that was a "Whip with the Silver Handle." Perhaps one of the finest of these doctors was Edward Jenner, who observed and realized the significance of cowpox on the fingers of milkers in relation to resistance to smallpox and who developed the first specific immunizing procedure in man — vaccination. Although its symbolism has changed somewhat, the "Gold-Headed Cane" may still be found in many of our clinics and laboratories. I hope that some of our clinical investigators will continue to be those who figuratively carry the "Whip with the Silver Handle." *John H. Dingle, M.D. The Whip with the Silver Handle. J. Lab. & Clin. Med. January 1961.*

Clinical-Surgical Conferences

COOK COUNTY HOSPITAL

The Management of External Small Bowel Fistulas

MODERATOR:
ROBERT J. BAKER, M.D.
Associate Director,
Department of Surgical Education,
Cook County Hospital

DISCUSSANTS:
WILLIAM GROVE, M.D.
Associate Professor of Surgery, University of Illinois College of Medicine; Surgical Staff, University of Illinois Research and Educational Hospitals

IRVING F. STEIN, JR., M.D.
Assistant Professor of Surgery, Northwestern University Medical School; Attending Surgeon, Cook County Hospital

DR. ROBERT J. BAKER: The occurrence of a postoperative small bowel fistula is a catastrophic, often unanticipated complication that surgeons must occasionally face. The mortality rate ranges between 20 and 30 per cent, and under optimal circumstances, prolonged invalidism is certainly the rule. Once the fistula is established, the symptoms may be primarily local, or the patient may quickly be reduced to desperate straits or complete collapse by virtue of immense losses of fluid, electrolytes, and protein, depending largely on the size and location of the fistula.

All of these patients require the utmost in judgment and experience in their management, and we feel that our discussants today can shed considerable light on these terrible problems. Dr. William Grove, associate professor of surgery and attending surgeon at the University of Illinois College of Medicine and Research and Educational Hospital, was formerly an associate attending surgeon in this hospital, and was as highly regarded by the residents then as he is now; since the resident group is a notoriously critical one, we feel that this is as strong a recommendation as one can have. Dr. Irving F. Stein, Jr., is attending surgeon at this hospital and assistant professor of surgery at Northwestern University Medical School. Dr. Stein, too, merits the unanimous acclaim of our severest critics. We hope to draw on the experience of these surgeons in solving some of the problems to be presented.

Case 1

DR. EDWARD QUARTETTI, surgical resident: A 37 year old Negro female was admitted to the surgical service with a five day history of cramping lower abdominal pain and nausea, but no vomiting. She had commenced passing clots per vagina on the second day of illness and felt this to be an atypical, early menstrual period. No placental tissue was passed.

Physical examination revealed tenderness in the right lower quadrant, marked distention of the abdomen, hyperactive, high-pitched bowel sounds, and on vaginal examination, a large uterus was palpated, firm and slightly tender.

Roentgenograms revealed air fluid levels in the small bowel. Barium enema was negative, and surgical exploration was advised. At surgery a

twisted right uterine fibroid was found, as well as subacute pelvic inflammatory disease. The fibroid was removed. The patient tolerated the procedure well and was discharged on the tenth postoperative day, doing well, with skin sutures removed.

She returned to the hospital on the following day with the information that the wound had opened spontaneously the night before, emitting copious amounts of green fluid which, she said, "bubbled out." On observation of the wound, large quantities of green, watery fluid drained spontaneously with some recognizable food particles.

DR. BAKER: The x-ray pattern was interpreted by the surgeon and the roentgenologist as substantiating the clinical picture, showing organic small bowel obstruction, and the patient was explored. Several loops of mid-ileum were adherent to the inflamed tube on the right, but an actual obstructing band was not found. However, the fibroid was removed, and the patient was considered to have made a complete recovery when she was discharged.

On readmission to the hospital, a short transverse incision which had been closed in one layer with double wire was granulating, and some greenish-yellow fluid was issuing from the wound. A drain was placed in the wound and continuous suction was applied. Fortunately she did very well. After about a week the drainage rapidly diminished, the wound granulated in, and in 10 days the fistula was closed. This was a very happy result, but the question that arose is one that we will pose to our discussants: At what point can you decide which fistula will close, and what do you do with a small fistula like this?

DR. WILLIAM GROVE: Was the bowel itself opened at any time? Was it adherent to pelvic structures?

DR. BAKER: Yes, very loosely. No actual adhesions were cut; the bowel was opened for decompression by 1 cm. enterotomy, and this was closed with two layers of sutures, catgut and silk.

DR. GROVE: One is interested immediately in the cause of the fistula. Primary among the causes of small bowel fistula following surgery is an accident with regard to the surgery itself, such as roughness in handling the tissues. This patient had a moderately distended bowel and it would not have been remiss to have done an enterotomy and put a suction tube in to decompress the bowel; this makes closure of the abdomen easier and the postoperative course smoother. There was some suggestion of adhesions in the pelvis. Even though they were struck off or swept off with the surgeon's hand, sometimes there are tears in the serosa, or even the muscularis. If the surgeon makes a quick inspection and sees that the bowel is not open, he will pass it off as unimportant, particularly if it is a small area. I think these areas should be sutured; that is, any torn serosa should be sutured because, if the distention continues or increases, the area could be the site of a perforation.

I was interested in the closure of the abdominal wall. I understand it was through-and-through peritoneum and fascia; the skin was closed separately. This is a little different from the true through-and-through closure, but not a great deal. We have seen fistula develop from through-and-through closure because of the bow-string effect of a deep suture across the "V" of the peritoneal closure. This effect is particularly apt to occur if the suture does not go in perpendicular to the abdominal wall, but rather goes in at an angle. If the bowel is distended against the suture and if there is no bowel activity, erosion or frank cutting of the bowel can occur. A loop of small bowel can also be caught between the suture and the abdominal wall.

This patient is said to have had pelvic inflammatory disease. Such cases are notorious for developing fistulas spontaneously following surgical manipulation within the pelvis. Abscesses develop which may erode into the bowel and also out through the abdominal wall. We have seen patients with half a dozen fistulas in the abdominal wall and all they have had is severe pelvic inflammatory disease with some operative intervention.

How wide open was this fistula? Were both ends of the bowel open?

DR. BAKER: The fistula was not visible in the wound.

DR. GROVE: For any fistula to close, it is axiomatic that there cannot be obstruction distal to the point of the fistula. This is most important in colon fistulas because these cannot heal spontaneously if there is distal obstruction. Half of colon fistulas will close spontaneously, but the higher the fistula, the less likely is this to hap-

pen. High jejunal fistulas will rarely close spontaneously, and ileal fistulas do not do so often.

I think you are fortunate that you did not have to reoperate this patient. One of the things I would caution against is trying to occlude the fistula with some kind of an appliance, such as a Foley catheter. It seems like an ideal thing to do, and sometimes it is tried. However, usually the fistula becomes larger. In my experience, there should be no more manipulation of the bowel than aspirating away of material to decrease the amount of destruction from digestion. Anything more than that has led only to more destruction of the bowel and a bigger fistula. T-tubes have been devised to bridge the defect, but again I have not been successful in accomplishing this.

Immediately upon suspecting a fistula, some kind of drainage should be instituted so that digestion of skin is kept at a minimum. Aluminum paste is effective only as long as the skin is intact. Once the epidermis is destroyed, aluminum paste will not do much good. Most of the pastes that are available are not very good because the digestive secretions tend to erode beneath them.

DR. BAKER: We have been most discouraged with the use of aluminum paste but have used instead a mixture of equal parts of protein hydrolysate powder and egg white. This becomes thick and pasty when mixed together and can be painted on a granulating surface where it will dry and form a thick crust. The proteolytic enzymes in the small bowel utilize this protein mixture as a substrate, and the skin will heal beneath it. Some silicone preparations have been used with success, but most, like aluminum paste, will not adhere to the wet surfaces.

I have two questions to ask: (1) Should this patient be put on gastric suction in an attempt to decrease the fluid passing through the fistula? (2) If we feed her, what should it be?

DR. GROVE: That depends on how low you estimate the fistula to be. If it is low, then I think the patient can be fed. When it is high, you are not gaining much by feeding the patient; yet this is the patient you would like most to aliment. Sometimes with a high fistula we have inserted a long intestinal tube, threaded it down the bowel, past the fistula, and fed the patient by this route. As to the type of food, in someone like this I would encourage a diet high in protein, and all that she would take.

DR. IRVING F. STEIN, JR.: I don't think there is any argument about the treatment of this case. The patient recovered nicely. She was fortunate that she did so well. The only possible discussion I can raise in terms of an argument is a question of the diagnosis of bowel obstruction. Why is it called small bowel obstruction with a moderate amount of gas in the cecum on the x-ray?

DR. MESZAROS: I think it was an incomplete obstruction.

DR. STEIN: I would agree with that. The differentiation between a paralytic ileus and small bowel obstruction which is incomplete is a very delicate one and sometimes cannot be made.

DR. BAKER: Apparently the obstruction was subsiding. She was watched for 36 hours. She never had frank peristaltic rushes, but the distention did not abate; x-rays were taken, barium enema was done, and since she had no scars or hernias, it was felt that it would be dangerous not to explore her.

DR. GROVE: Would you consider it important that she had no vomiting, in spite of distention?

DR. STEIN: It is unusual not to have vomiting in small bowel obstruction. Those that do not vomit are usually obstructed lower down.

Case 2

DR. MARVIN TIESENGA, surgical resident: The patient was a 55 year old Negro male admitted to the surgical service with a history of intermittent right upper quadrant pain and vomiting, three or four times daily for three days, and marked abdominal distention of two days' duration.

Physical examination revealed marked abdominal distention, hypoactive, high-pitched bowel sounds in rushes, and moderate tenderness throughout. Roentgenograms were suggestive of small bowel obstruction with large laddered loops of bowel seen.

The patient was explored, and a band in the right lower quadrant was found obstructing the mid-ileum; this was lysed. Enterotomy was performed in the midjejunum for decompression and to facilitate closure; the bowel was threaded on a Poole suction tube, and aspirated. The enterotomy was closed with a purse string of fine silk, and this was oversewn with several fine silk

Figure 1. Flat film of the abdomen, showing dilated loops of bowel and radiodensity in the right upper quadrant.

seromuscular sutures. The wound was closed with doubled stainless steel wire.

Postoperatively there was transient oliguria and moderate tachycardia. On the sixth postoperative day a wound infection developed, but on the tenth day the wound commenced draining thin, bile-stained material.

DR. BAKER: This patient was seen by several consultants prior to surgery and was observed for several days. We thought he had a small bowel obstruction, but there were several things on the films that delayed operation. I think we should view the films now.

DR. MESZAROS: The first film (Fig. 1) shows a few distended loops of small bowel in the midabdomen; no gas in the colon; but we see a calcification in the right upper quadrant. This was thought by one observer to be a gallstone ileus, and some delay resulted.

The upright film taken a few hours later (Fig. 2) shows multiple small intestinal loops with gas, but none in the colon, and this is quite typical of small bowel obstruction. The calcification is now in the left lower quadrant, and it was thought the gallstone was passing. To make sure it was not a kidney stone an intravenous pyelogram was done; it was normal.

Lateral film shows the calcification to be anterior; so it rules out kidney involvement (Fig. 3). In looking at this in close detail you see it is not a stone. It has the appearance of an undissolved tablet in the intestinal tract, and it was a radiopaque pill.

DR. BAKER: The patient was operated upon, and an obstructing band was lysed. The patient had an episode of hypotension during surgery, and postoperative oliguria was a problem. The question was whether this was oliguria secondary to the stress of surgery or renal insufficiency following surgery. The patient did gradually increase his urine output to 550 cc. a day. The sixth postoperative day was marked by the appearance of a wound infection. The skin sutures were removed, the wound was opened, and foul-smelling material was obtained. Subsequently it was apparent that this was not the usual wound infection, and fairly large quantities of thin fluid drained out. On the tenth day, it was obviously not a primary wound infection but a fecal fistula. The patient began to drain copious amounts of green fluid, and the question was that of management. There was obvious mucosa in the base of the wound, and it was from this point that all the fluid issued. The wound was opened widely, and subsequently looked clean; large quantities of thin green material were issuing from the open portion of the bowel. Suction drains were placed on each side but not into the bowel, and it was felt that if we could not control it, further measures would be necessary. What would be your next step?

DR. STEIN: Let us go back for a minute and talk about a few generalities and then be specific. Dr. Grove has mentioned many of the underly-

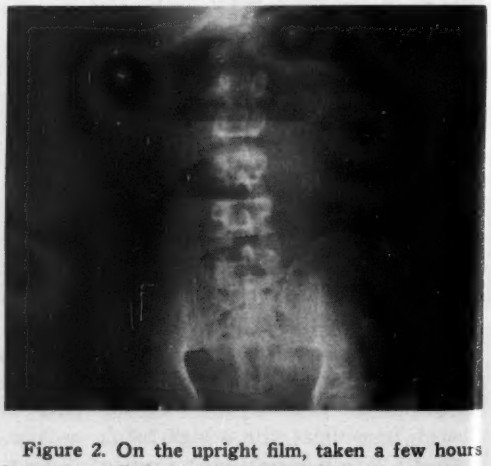


Figure 2. On the upright film, taken a few hours later, the radiodensity is in the left lower quadrant. Note dilated loops of small bowel with air-fluid levels.

Figure 3. The lateral view of the intravenous pyelogram shows the radiodensity to be considerably anterior to the pelvis of the kidney.

ing causes. In general, postoperatively we could have a leaking anastomosis, a leaking enterotomy, a leaking duodenal stump, a stitch through the bowel, or a foreign body perforation such as from a toothpick or fish bone as a cause of a fistula. We can have ischemic or gangrenous bowel, as well. It may be due to a strangulated hernia, but that usually produces a spontaneous fistula through the hernia. We can have abscesses of various types, diverticulitis, appendicitis, or appendiceal abscess. Regional ileitis is another common cause for chronic fistula. Tuberculosis and actinomycosis are also causes of more chronic problems. Another possibility is a retained sponge or surgical instrument. Post-traumatic perforations with fistula are possible.

In terms of diagnosis there are several points we should consider. Abscess may not mean a fistula. Fecal-smelling pus may not be due to a fistula, but if gas comes out concomitantly it is a fair indication, although it is not 100 per cent. Food particles are a good indication that this is coming from the bowel.

Another factor that we must determine is how much is coming out. This will help determine whether or not we operate. We also want to have some idea of whether it is an incomplete or a complete fistula. We want to know if there is gas or stool in the rectum and if we put an indicator in by mouth or per fistula will it come out per rectum. Is an indicator going to go through, and is there a distal obstruction? For this purpose the use of radiopaque material as the indicator is very good. We can put it in by mouth or by fistula and see where it goes so we will have a better idea of the location of the fistula.

As for the principles of treatment, certainly in the high fistula, in one that is draining copiously and is starting to erode skin and superficial tissues, there will be a severe fluid, electrolyte, and nutritional problem. A duodenal fistula can be the worst, particularly if there is obstruction of the upper jejunum. This fistula may drain 1000 cc. or more a day, and this material may be returned to the jejunum via a jejunostomy feeding with great benefit. That may make the difference between life and death in duodenal fistula. Sometimes we have to replace as much as 6000 cc. a day, and we have to know what electrolytes to put in that fluid. This patient's electrolytes were very well handled and remained close to normal until just before he died, thus were not a therapeutic problem. I will not discuss nutrition because this was not the immediate problem, but does finally become the cause of death. He probably lost about 30 or more pounds through nutritional deficit.

What about the local care of the fistula? There are a number of things you can use, although none of them does much good. The best thing is to suck away the fluid. You remove as much fluid as possible and measure it. That will help protect the abdominal wall. The suction device may become blocked off; it has been suggested that daytime suction can be done nicely by the patient himself. That night he can be put on a Bradford frame and turned over so that the fluid can run off by itself. This may be a life saving measure by preventing erosion of the abdominal wall.

What are the aids to spontaneous closure? Many things have been written in detail in the literature, but they are actually of very little value. One method that may help is the passage of an intestinal tube by mouth. If you get a Miller-Abbott tube down, you can suck out all the material and later replace this fluid into the distal side of the fistula. This can be a good method of getting the patient in better condition and postponing surgery while he is in such a poor state. The conservative cure of the small bowel fistula is full of gadgets, most of which will not work.

A high fistula with copious drainage will require vigorous fluid replacement therapy. If the

amount of drainage does not start to decrease in four to six days, early surgical intervention probably will be necessary. If the fistula is lower and draining less, we will be less inclined to operate upon the patient, and it is more likely that that one will close spontaneously.

But what do we do if surgery is necessary? The incision is a hard one to make because you are going through an area that is completely eroded away and very difficult to close. You may have loops of bowel right in the bottom of the wound. I have occasionally made the incision in the opposite direction from the first incision. If it was vertical originally, make this next one transverse so that you are entering the abdominal cavity in a relatively clean area. On the other hand, where the two cross is the bad spot because it may be hard to close. Some will not close completely and will have to granulate for healing to occur.

What do you do when you get inside? Find the site of leak, resect it, and do an end-to-end anastomosis. This can be extremely difficult and that is why there are less advisable procedures being done, such as side-tracking procedures. It may be a life-saving measure, but it is asking for a good deal of postoperative trouble that may last for years. Blind fistulas continue to drain mucus and become infected and can cause abscess formation, further fistulas, and anemia and a good deal of abdominal distension. Blind loops, even where they are relatively short, fill up with foreign material, such as cherry pits, seeds or other inert material, which can cause chronic obstruction. If you can do the surgery without producing a blind loop, your patients will have better results.

DR. BAKER: Our problem here is still before us. Where in this man's course should we have operated upon him?

DR. GROVE: In retrospect, when one studies the electrolytes, one sees that there was a time when the patient was still relatively in balance, and surgery probably should have been undertaken at that time. However, it is extremely difficult to decide when to operate. It is always easy through the "retrospectoscope" to make the right decision. This was a small bowel obstruction presumably from a band. When there is a large area of gangrene, we all recognize it and quickly resect it; but when it is a band and the area of constriction is small, we are apt to be less careful about inspecting that area. On the antimesenteric border where the blood supply is less adequate, there may be a little blue area which can be overlooked. Such an area should always be looked for, and, if present, turned in with a few carefully placed sutures. I wonder if this patient's postoperative oliguria may not have been due to his not being in perfect balance at the time of surgery. I am not critical of this because sometimes one is forced to operate before rehydration can be accomplished. I think the preoperative preparation was adequate; considerable time elapsed prior to surgery.

DR. BAKER: We have a film to show where the obstruction was. A Foley bag was inserted into the proximal limb of the fistula to divert the flow, and this promptly resulted in the diameter of the fistula becoming three or four times its original size. We are convinced that this was not the way to manage such a problem because the bowel wall would not tolerate the pressure of the Foley bag. Consequently, the wound became digested so we promptly took the patient to the radiology department and this film was obtained.

DR. MESZAROS: In this film you see the catheter in the distal limb after the opaque substance has been injected into the fistula, which was in the ileum, perhaps in the distal 18 inches (Fig. 4). There was considerable irritability present.

DR. BAKER: It appeared that the enterotomy was in the jejunum, and not the site of leak. A

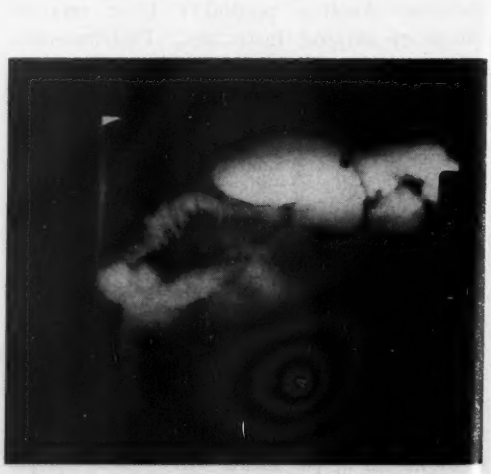


Figure 4. Radiopaque contrast material to show the level of the fistula. Its distal limb was injected, promptly filling the terminal ileum and cecum.

fistula secondary to an infarcted segment of bowel is most likely, just as Dr. Grove described. If you were to operate, what would be your approach in the face of a wide open wound?

DR. GROVE: I have tried not to operate on these people for a long time after the initial complication. We have seen quite a few; we have made some ourselves and some we have inherited. We have tried to keep these individuals in nutritional and electrolyte balance. These patients require a great deal of nursing care and attention; in fact, it has to be continuous. When the wound is clean and granulating and skin erosion is minimal, the repair can then be accomplished.

The thing that complicates his getting over the fistula is not how much he is losing but how much he is obstructed by ileus or peritonitis. If he can get over the initial insult of the fistula and then is able to eat, the problem is much simpler. I tend to favor conservative measures.

DR. BAKER: This patient had 14 units of blood between February 12 and 29, and innumerable units of plasma, without avail; he was not able to take oral feedings.

DR. MANUEL E. LICHTENSTEIN: I feel strongly that earlier operation was indicated, probably five to seven days after the onset of the fistula. However, this patient was never a good risk, and the trauma of an extended procedure would have carried a prohibitive mortality. Very occasionally, some adhesions adjacent to the fistula can be freed and the fistula closed with some interrupted sutures. Even if the closure does not hold in its entirety, at least the fistula may be smaller. Certainly, under most circumstances, conservative management is best.

DR. BAKER: I should like to thank our participants for their illuminating and informative discussion.

Summary and conclusions

1. A fecal fistula of the small bowel may follow:
   a. Intentional creation of the fistula, which does not close spontaneously.
   b. Unintentional sequel to a surgical procedure, such as a leak of intestinal anastomosis, with or without intervening abscess formation.
   c. Inflammatory lesions of the bowel, with abscess formation (Meckel's diverticulitis, regional enteritis, appendicitis).
   d. Inflammatory lesions of the bowel, without abscess formation (regional enteritis, tuberculous enteritis, abdominal actinomycosis).
   e. Penetrating trauma (gunshot, stab wound).
2. Use of drains to the area in which leak from the bowel is a possibility may mean the difference between survival and death; a fistula to the outside is far better than leak followed by peritonitis and death.
3. Fecal fistula will close spontaneously in about 50 percent of cases; those that do *not* close spontaneously may involve:
   a. Obstruction distal to the fistula.
   b. Lining of the fistulous tract with mucous membrane which meets skin.
   c. Presence of a foreign body (bullet, infected silk suture, fecalith, etc.).
   d. Inadequately drained abscess cavity.
   e. Inflammatory lesion of the bowel.
   f. Malignancy.
4. If a fecal fistula is to be treated properly, it *must* be determined that no distal obstruction exists. X-rays with contrast media are utilized to ascertain this.
5. The advent of a high, small intestinal fistula is quickly followed by:
   (1) Severe fluid and electrolyte loss;
   (2) Digestion of skin and fascia at fistula.
   The severity of these conditions is determined by the level and the size of the fistula, assuming no distal obstruction exists.
6. Treatment of the fecal fistula may be expectant or surgical. Conservative management is not indicated after two to three months, perhaps less, as fistulas of long-standing will not ordinarily close spontaneously.
7. Surgical treatment varies with the cause and the location of the fistula. It may involve:
   a. Excision of the tract and closure of the intestinal defect.
   b. Excision of the tract and resection of the portion of involved bowel (especially applicable if the defect is on the mesenteric side of the bowel).
   c. Side-to-side enteroenterostomy, by-passing the fistula (partial diversion).
   d. Transection of the bowel proximal to the fistula, closure of the distal end, and end-to-side enteroenterostomy (complete diversion).

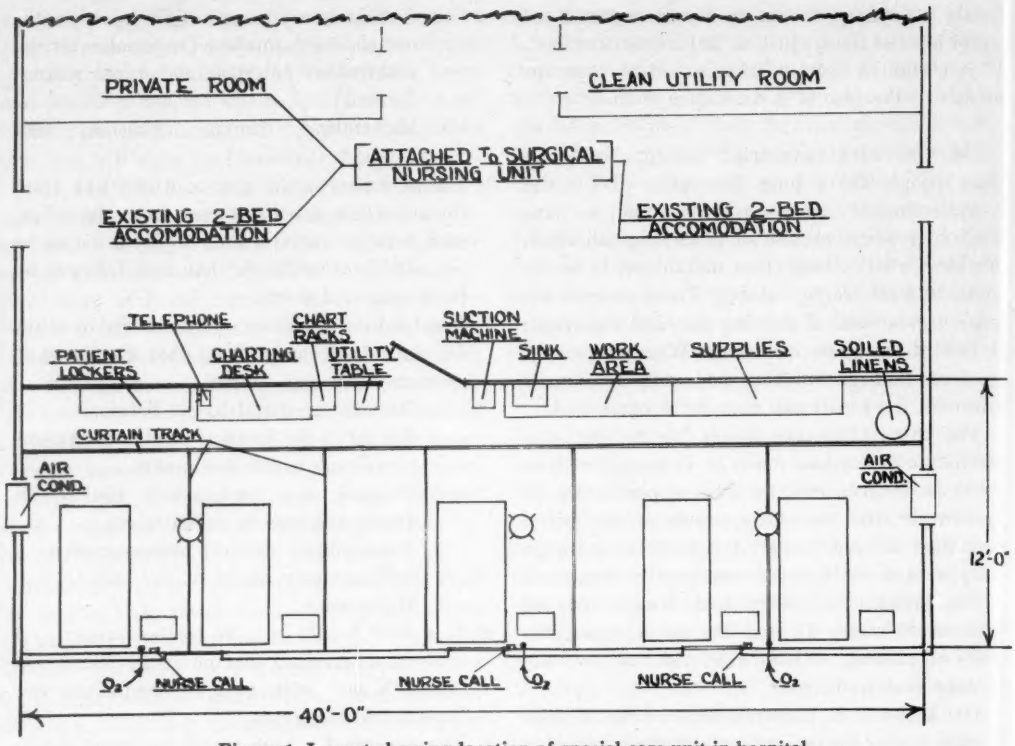


Figure 1. Layout showing location of special care unit in hospital.

A Special Care Unit In a Community General Hospital

WILLIAM K. STEPHAN, M.D., and C. ELLIOTT BELL, M.D., *Decatur*

Small opportunities are often the beginning of great enterprises. The special care unit at the Decatur & Macon County Hospital is a convincing testimonial to the truth of this adage. This unit began as a modest 90-day pilot study on Nov. 20, 1958. After eighteen months of continuous operation it is hailed as a truly significant advance in the care of critically ill patients.

Problems in patient care at the Decatur & Macon County Hospital are common in all community hospitals. Emergency rooms are too busy and usually too small to permit several hours' intensive care of severely injured people. Every physician has been frustrated in attempting to care for a desperately ill patient in a room or crowded ward in a regular nursing unit. The nurses, aides, and orderlies are fully occupied with regular assignments. To meet a crisis with one patient must mean less than optimal care, for a time, for many others.

The recovery room, now recognized as a necessity in all progressive hospitals, can provide excellent care for each day's surgical patients. But what happens to the more seriously ill patients after the recovery room closes? The need for adequate care for all patients at all times is obvious to every physician, nurse, and administrator.

The simple and direct solution to this problem is a special care unit.

Presented before the Section of Anesthesiology, Illinois State Medical Society Annual Meeting, May 24, 1960.

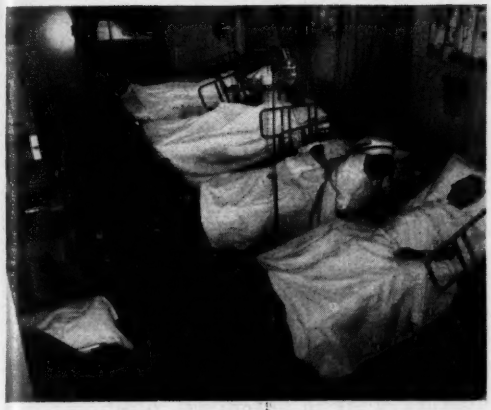


Figure 2. Portable cabinets, window air conditioner, and oxygen outlets installed in special care unit at Decatur & Macon County Hospital.

Development

A successful special care unit must begin with the nucleus of individuals convinced of its need and determined to prove its potential. The nucleus must be the director of nurses, the administrator, and several physicians. At the Decatur & Macon County Hospital the nursing service and Education Committee, augmented by interested representatives from administration, general practice, surgery, pediatrics, and anesthesiology, held the first organizational meeting in 1958. Three basic ideas were crystallized at this conference: (1) start with a small unit; (2) use top quality personnel; (3) include only bare necessities.

Physical specifications. A five bed ward, 12 by 40 feet, was selected for the pilot study, with the future possibility of enlarging the unit to include two adjacent two-bed wards. (Fig. 1). Several portable cabinets and a small nurse's desk were added. Window air conditioners and extra outlets in the oxygen piping system were installed. (Fig. 2).

Personnel. The staff of the special care unit is small — only one registered nurse and one licensed practical nurse on each shift.*

During peak loads, or when one patient requires the nurse's undivided attention, additional nursing help is promptly supplied by the assistant nursing supervisor. Similarly, when the licensed practical nurse or nurse's aide is not needed in the unit, she is temporarily assigned to work on a nearby general nursing unit. Such flexibility has assured the special care unit of optimal personnel coverage in all situations, and the regularly assigned personnel is fully utilized at all times.

Efficient distribution services from ancillary departments to all nursing units keep nursing personnel at their stations — a significant factor in the success of the special care unit.

A few nurses' aides with unusual temperament, interest, and ability have been especially trained to work effectively in place of the licensed practical nurse in the special care unit.

TABLE 1. Supplies Available in the Special Care Unit.

Fibrinogen	Na lactate (1 molar)
Albumin	Na thiopental
Plasma	Succinylcholine chloride
A plasma expander	d-tubocurarine
30% ethanol (for vapor inhalations)	50% dextrose/water
10% calcium chloride	Cedilanid

Supplies. The supply of drugs and equipment is designed to meet all crises. Agents not usually in stock in other units are available in the special care unit (Table 1). In addition, special equipment is maintained in the special care unit (Table 2).

Admitting policies

It is axiomatic that any patient who has a chance for recovery under extraordinary care is a candidate for admission to the unit. In addition, emergency surgical patients whose operations are performed when the recovery room is closed are routinely admitted to the special care

TABLE 2. Surgical and Resuscitation Equipment for Special Care Unit.

Emergency thoracotomy tray	Lumbar puncture tray
Thoracentesis tray and underwater seal drainage apparatus	Venous pressure tray
Minor surgical tray (with intravenous catheters)	Sterile gloves and gowns
	Portable spotlight (A.C. and/or battery)
	Sharp disposable needles
Laryngoscope with variety of blades	
Endotracheal tubes and adapters	
Oral and nasal airways	
Non-rebreathing valve (Fink modification) and bag or Ambu Pneumonator	
Tracheotomy trays (Sheldon tracheotome)	
Portable suction machine	

unit for postanesthetic recovery. Only three types of patients are excluded: (1) hopeless terminal cases; (2) isolation cases; (3) pure psychotics who are either destructive or agitated.

Since the special care unit was devised to provide the finest possible nursing and medical care, the usual lines of jurisdiction between physicians and nurses are sometimes indefinite. The delicate problem of assigning authority for admission and discharge is potentially a "two-headed tiger." The current policy of the Decatur & Macon County Hospital authorizes the Nursing Supervisor to transfer or admit to the special care unit any patient whose condition requires close supervision and intensive therapy. The attending physician must approve the transfer, and he may request direct admission to the unit for a patient by discussing the case with the nursing supervisor. Thus the usual delay in clearing patients through nonprofessional personnel in the admitting office is avoided. The nursing service determines when a patient in the unit may be adequately handled on a regular nursing unit, and the physician is asked to discharge the patient from the special care unit.

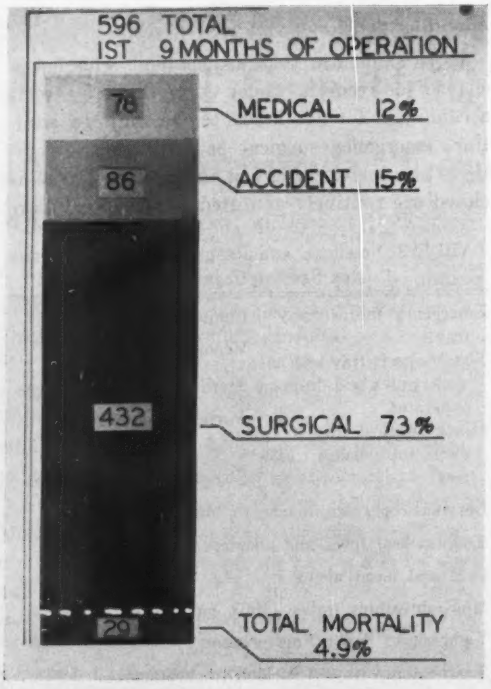


Figure 3. Utilization of special care unit.

In over eighteen months no one has "twisted the tiger's tail" and challenged this bilateral authority. Controversies, if they arise, will be referred to the chief of service involved.

Operational regulations

In such a small unit the patients cannot be segregated according to age, sex, or race, except by curtains mounted on ceiling rollers. Anticipated objections have not materialized. When a patient is well enough to complain of his surroundings, he no longer requires special care.

One adult member of the patient's family may visit at any time, day or night. Children are excluded except in life-or-death situations.

Flowers and gifts are not allowed in the unit. When received, they are displayed to the patient, and then the family is asked to take them.

Facilities for entertainment are not permitted. Radios, television sets, telephones, and smoking are specifically prohibited. All of these regulations are consistent with the basic policy of maximum care and basic necessities.

Public relations

A carefully planned public relations program is a requirement for success of the special care unit. Prior to the opening of our unit, the entire professional and nursing staffs were informed in detail of the policies and regulations which would govern it.

Before admission to the unit each patient and his family are fully advised of the purpose, function, and regulation of the unit. Close contact and frequent communications between families and the professional and nursing staffs have greatly enhanced good will. The nursing supervisor is specifically responsible for communications with the family, but frequently the physician and house officers add important words of encouragement and explanation.

Utilization

Our unit has been a busy place since its inception (Fig. 3). In an average month about 65 patients are admitted; about 73 per cent are surgical, 15 per cent are medical, and 12 per cent are accident cases.*

**Obstetrical cases requiring special care are handled in the intensive therapy and recovery room unit of the department of obstetrics, which is operated on a 24-hour basis.*

About one third of the patients stay in the special care unit six hours or less (Fig. 4). An additional one third is discharged after 6 to 24 hours. The majority of these patients are those admitted for recovery from anesthesia following emergency operations. Although this group of patients represents "bread and butter" for the unit, one should not conclude that the special care unit is just another recovery room. Approximately 10 per cent of the patients remain in the special care unit more than three days.

Statistical evaluation by the hospital comptroller indicated the unit was utilized to 70 per cent capacity throughout the first nine months of its operation. Occupancy throughout the entire general hospital during this same period was over 85 per cent.

The mortality rate in the special care unit has been 4.9 per cent. When one considers the critical condition of many patients in the unit, this rate is surprisingly low. The death rate throughout the entire hospital has been approximately 1.6 per cent.

The School of Nursing has effectively used the special care unit because if its excellent opportunities for clinical demonstration of the nursing arts in their finest applications.

Economics

The Unit has functioned exactly as planned, that is, it has been optimally staffed and financially independent. The rates charged for services are as follows: A patient admitted for six hours or less is charged $8.25. The basic minimum for regular room is $17.50, and the additional charge for special care is $16.50 per day, a total of $34 per day. This figure may seem relatively high, but it is not. On the contrary, it represents a substantial saving to the patient, since private duty nurses, if available, charge $48 for twenty-four-hour service in addition to the room charge, a total of at least $65.50 daily. It is encouraging to note that Blue Cross has fully approved the charges for this special care unit.

Critique

There are no immediate plans to increase the size of the special care unit at our hospital. The optimal size of the unit should be 16 or 18 feet wide instead of the current 12 feet so that more equipment cabinets might be installed, and carts and beds moved with greater ease.

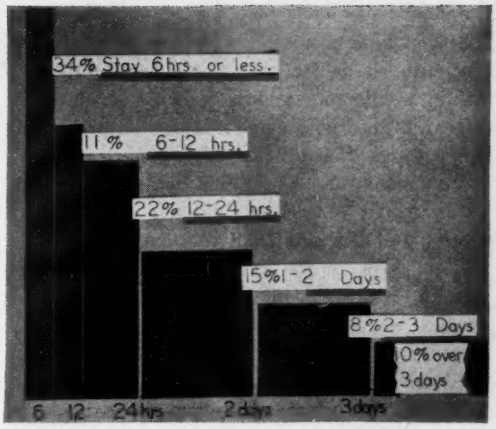


Figure 4. Duration of stay in special care unit.

This unit was started on a small scale for specific reasons. Too large a unit poses greater disadvantages than one that is too small. First, more beds might tend to encourage the admission of undesirable cases; second, the discharge of cases might be delayed unnecessarily; third, more patients in the unit would require a larger staff and thus increase costs; and fourth, nursing care for the patients who need it most might be less than optimal.

The most apparent deficiency in the special care unit is the absence of isolation facilities. Serious doubt exists in many minds about the advisability of incorporating in the special care unit an area for the care of contaminated or contagious cases. Isolation techniques can seldom be maintained in emergency situations. Cross-contamination to other desperately ill patients is a sobering consideration. Therefore, an isolation facility is not being planned.

A more permanent type of partitioning may be desirable so that noisy patients and those with malodorous conditions may be separated from their neighbors. This is a rather serious consideration, particularly for medical patients, and improvements are being considered.

In further critical appraisal, one recognizes that the location of our unit might be improved if it were immediately adjacent to the emergency rooms, the operating suite, and the internes' call room. On the other hand, its proximity to a general nursing unit is a desirable feature because additional help can be recruited in a matter of seconds in emergency situations.

Developing new units

If you have been sufficiently innoculated with our enthusiasm for the special care unit and should decide to establish one in your hospital or plan to incorporate one in a new hospital, then a few suggestions are in order.

First, what are the specific needs for your institution? Do you need a relatively larger or perhaps a smaller unit than the one which serves the 360 beds in the Decatur & Macon County Hospital? Do you maintain an active neurosurgical service? Are many trauma cases referred to your hospital? If so, more beds may be needed than we have indicated. Conversely, if your hospital has an elite clientele with mostly elective problems, a relatively smaller unit may suffice.

Second, visit some special care units. Several have been established in large metropolitan teaching centers, and each of you is certainly welcome to evaluate our unit in Decatur.

Third, read some of the comprehensive literature on this subject.

Fourth, after researching the needs and plans for your unit, sell the idea of a special care unit to your administrator, director of nurses, and your medical colleagues before your project begins. Finally, start with a small unit, and staff it with your very best nurses.

Summary

The first special care unit in a community general hospital in Illinois has been functioning since November, 1958. Its basic purpose is to concentrate into one small area maximum care with the best facilities for critically ill patients, at a reasonable price.

Any patient who has a chance of recovering with extraordinary care is a candidate for admission. The unit serves also as a recovery room for emergency surgical patients. Only hopeless terminal cases, isolation cases, and agitated psychiatric patients are excluded.

The unit is staffed 24 hours a day with one registered nurse and one licensed practical nurse or nurses' aide, each of the highest quality.

A ward with space for five beds and two carts has been utilized to more than 70 per cent of capacity. Two thirds of the patients remain in the unit 24 hours or less.

The authors recommend the establishment of special care units in other community hospitals. No other innovation in total care can so dramatically reduce mortality and morbidity. The unit further provides:

(a.) Immediate availability of complete emergency armamentarium;
(b.) Optimum utilization of all nursing personnel;
(c.) Excellent teaching opportunities;
(d.) A potent instrument for improving public relations, and
(e.) Twenty-four hour postanesthetic recovery facility.

You will be amazed that a project so small can accomplish so much for so many critically ill patients.

* * *

In the ten months since this paper was presented, the special care unit has been enlarged. By including in the unit an adjacent four-bed ward plus a private room and an examination-utility room (see Fig. 1), the special care unit can now accommodate ten bed patients and three patients on carts. The staff has been increased to two registered nurses and two practical nurses. Central heating-air conditioning units with individual thermostats have been installed as well as two additional sinks. Admitting, operational, and financial policies are unchanged. Utilization of the enlarged unit has been approximately 65 per cent of capacity. Inclusion of a private room has been especially beneficial. Acceptance by the laiety and the profession continues to be enthusiastic.

A single conversation across the table with a wise man is worth a month's study of books.
—Chinese Proverb

Alcoholism and Food Allergy

HERBERT E. KAROLUS, M.D., *Dwight*

IT HAS BEEN generally observed that the fundamental difference between the casual or social drinker and the alcoholic is the factor of neurotic compulsion—the inability of the alcoholic to "take it or leave it." Another significant difference relates to the peculiar changes in the personality and behavior suffered by the drinking alcoholic. Since such factors are not evidenced until after the first drink, it is tempting to speculate that perhaps some substance in the drink itself causes the victim's "sensitivity to liquor," a phrase often used in describing alcoholism.

Experienced therapists have also observed a peculiar phenomenon, the so-called "dry-drunk," which occurs as a symptom with some abstaining alcoholics. The patient on a dry-drunk manifests behavior patterns and personality changes similar to those he shows when drinking. Might such manifestation be due to reaction to allergens in his food similar to those found in the alcoholic beverages he drinks? An almost universal action of the alcoholic in attempting to solve his problem is to change his choice of beverage from, say, gin to whisky or from whisky to vodka or brandy. Surprisingly enough, this seems often to work briefly.

The rationale for believing that the alcoholic is, indeed, peculiarly sensitive to the beverages he imbibes, involves the basic principles of a biochemical reaction within the human body, with its effect on the nervous system. Once the alcoholic starts to drink, he reacts in much the same uncontrollable manner as the hay-fever victim, who sneezes uncontrollably from contact with certain pollens, or the food-sensitive person who develops gastrointestinal symptoms, purpura, or urticaria. The analogy is further borne out by a recently published comparison of alcoholism with obesity and compulsive eating[1].

To explore this problem, a research project involving 442 alcoholics was started in November, 1958, at the Keeley Institute.

From the Keeley Institute, Dwight.

Method of study

Food sensitivity. Acting on the premise that sensitivity to some foods might potentiate or complicate the problem of alcoholism, we thought it reasonable to explore, by standard diagnostic procedures, the qualitative and quantitave allergic reactions of a test group of alcoholics.

In earlier experiments, patients who had previously been diagnosed as alcoholics had voluntarily contributed valuable clinical information. They were put on a fasting diet for from three to five days, after which daily test meals were given. A whole meal of only one substance, such as corn, rice, or wheat, was given once daily and the patient closely observed for objective symptoms—changes in pulse rate, temperature, respiration, mannerisms, speech, behavior, and the like. In some patients there was increased flushing, fidgeting, excitement, or unsteadiness of gait. In some, a complete change of personality took place; serenity was replaced by belligerence; a drink was first requested, then demanded; and it was reasonable to suppose that, had alcohol been accessible, the patient would have begun a new drinking cycle.

On the assumption that such manifestations might well be a direct reaction to food allergies, with concomitant neurologic and psychologic effect, it was considered that the alcoholic might be desensitized, as with other allergy victims. As a first step, skin tests were made on 442 alcoholics. Allergens included apple, barley, blackberry, corn, date, fig, grape, hops, juniper, malt, oats, plum, rice, rye, sugar cane, tapicoca, wheat, yeast, and oak. Coffee and tobacco were also included, for while these are not ingredients of alcoholic beverages, their addictive qualities are felt to complicate alcohol addiction. While we are aware that many allergists disapprove of skin tests for foods, we considered this the method of choice because of the time element involved.

Further test meals. In the more recent series of test meals, twenty patients volunteered to submit to testing with the foods to which they had

reacted in the skin tests. Of these, 14 were tested for one food and six for two foods. Test meals of rice, grape, and rye were selected as interfering least with the general diet; additionally, one patient was tested for apple and one for wheat. Patients were instructed to abstain, for five days in advance of the test meals, from the foods on which they were to be tested, and all medication was withheld for 36 hours before the tests.

Test meals were served at 8 a.m., the last previous meal having been eaten at 5 p.m. the preceding day. Test individuals were under constant observation from 8 a.m. to 10 a.m. following the meal. They were checked again at noon, at 5 p.m., at 7:30 p.m., and at 7:30 a.m. the day following. Pulse rates were recorded every 15 minutes and temperatures at half-hour intervals.

Preliminary results

All 442 patients given skin tests showed at least one reaction. The average was seven reactions per patient. Two patients exhibited sensitivity to 13 allergens. The most frequently positive tests were for rye (301) and for wheat (239). Fewest reactions were to dates (58) and sugar cane (80).

Tested patients were advised to take weekly desensitization treatments from their family physicians. Some 200 complied; the others can serve as a control group for later evaluation of results. We believe that not only may such treatments help the alcoholic physiologically but also that the compulsion to drink may be lessened through the psychotherapeutic value of regularly continued constructive effort by the patient. While sufficient time has not yet elapsed for statistical conclusions on results, there have been encouraging reports from individual patients.

Following test meals 20 specific reactions were noted, the composite reactions determining the plus range. For skin tests, this average equaled 2.5 plus, whereas for meal tests the average equaled 2 plus. Two of the negative test meals, of grape, were 1 plus; in skin tests grape was 1 to 2 plus. The other 5 negatives in test meals were with rye.

Test meals confirmed 69 per cent of skin tests. Recognizing that some skin tests showed only a slight reaction (1 plus or 1 to 2 plus) it may be reasonable to suppose that if only the 3-plus or 4-plus skin reactors had been selected for test meals, the ratio of test-meal reactions to skin tests would have been higher.

Conclusions

While it is too early to draw any significant conclusions from the work so far done, the findings are at least interesting enough to encourage further studies. These are now under way and will be reported at a later date.

Summary

Examination of 442 alcoholics at the Keeley Institute has led to support of the belief that there is a demonstrable relationship between alcoholism and food allergies. Skin allergy tests followed by test meals were employed to explore these relationships, while desensitization through weekly injections of allergenic extracts of offending substances appears to be offering both physiologic and psychologic therapy. Further investigations are in progress.

Appreciation is expressed by the author to George Marsh, of Hollister-Stier Laboratories, Chicago, for valuable assistance in providing allergen test materials and for assisting with testing and interpretations, and to C. S. Boruff, Ph.D., of Hiram Walker & Sons, Inc., Peoria, for defining materials used in alcoholic beverages and for consultation on allergy data.

REFERENCE

1. Randolph, T. G.: The Descriptive Features of Food Addiction, Quart. J. of Stud. Alcohol, 17:198-224, (June) 1956.

Sometimes one pays most for the things one gets for nothing.—*Albert Einstein*

CASE REPORT

Membranous Dysmenorrhea

A Case Report

JOSEPH P. MIRANTI, M.D., *Greenup;* JOHN F. HUBBARD, M.D., *Mattoon;* and K. J. COSTICH, *Oak Park*

THE PURPOSE OF this paper is to report a case of membranous dysmenorrhea with a six year follow-up which has been treated successfully by relatively simple but conservative means.

The case is that of a 40 year old, well developed, well nourished white female who was seen for the first time on Dec. 8, 1953, complaining of an exuding odoriferous, purulent discharge from the vagina. She stated that she had had menstrual periods with passing of solid particles ever since she was 15 years old. Her first menstrual period was at the age of 14. These were regular and occurred about every 26 to 30 days. During the menstrual period, especially the first day, there was extreme, incapacitating cramping. She had had one pregnancy carried to term 19 years prior to being first examined by one of us (J. M.).

Physical examination was essentially negative except for the fact that protruding from the external cervical os was a strip of avascular necrotic tissue about 2 mm. in diameter extending back through the os, which constricted the tissue. In our inexperience with a case of this sort, we considered that the patient had had a miscarriage with incomplete separation and partial retention of secundines. She emphatically denied intercourse over a period of at least two years, having been separated from her husband for that time. Surrounding the necrotic tissue protruding from the os was copius, yellowish-green, purulent material.

The patient was put on antibiotics, and a douche of 2 tablespoons white distilled vinegar to 1 quart warm water was prescribed. Two days later the patient brought in a specimen from her vagina which measured about 6 cm. x 1.5 cm. x 0.5 cm. On examination the cervical os was normally patent, and the purulent material was greatly lessened in amount.

Vaginal smear revealed no gonicocci and the Kahn was negative. Cultures for acid-fast bacilli were negative. The Widal test revealed a positive titer in dilution of 1:160 for typhus. Subsequent follow-up attempts to duplicate this positive agglutination were unsuccessful. Red blood cells and urinalysis were within normal limits.

A diagnostic D and C performed on December 18 revealed only secretory endometrium. Subsequent months of mild therapy with very conservative means were accompanied by the typical incapacitating cramping and the passage each month of a complete cast of the uterus following which there was abrupt cessation of all symptoms. The patient led a normal life until the onset of her next period.

Gross pathology showed a friable blood-clot-like cast of the cavity of the uterus as in figure 1 (top). The microsection showed blood with sloughed off endometrial tissue. There was no organization of the clot or attempt at tissue formation. After four months' time it was decided logical to use a Streptokinase®-Streptodornase® douche in the attempt to break the cycle of formation of this necrotic membranous cast. Accordingly, the patient was instructed to take a douche consisting of 100,000 units of Streptokinase and 25,000 units of Streptodornase dissolved in one quart of water. She was instructed to use this douche on Tuesday and Friday nights at bedtime and the rest of the week she was to use the white vinegar douche. The period following the first use of the Varidase® douche was accompanied by the usual cramping, but the cast did not pass entire. It seemed subjectively to the patient that the usual cast was fragmented, and within three months the patient was reporting a marked relief of cramping at the menstrual period. After four months the patient reported no cramping and a normal menstrual period of five days with no clots and no cast. The patient used the Varidase douche twice a week from August, 1954, until February, 1955. After that time she reported that, while she continued douching with the white vinegar, at times she did not use the special douche since there was neither cramping nor membrane at her periods. The patient was seen in follow-up on March 13, 1956. At this time a pelvic examination showed absence of clot (or membrane) and an otherwise normal genital tract. The patient reported normal periods every twenty-eight to thirty days with the passage of no more membrane.

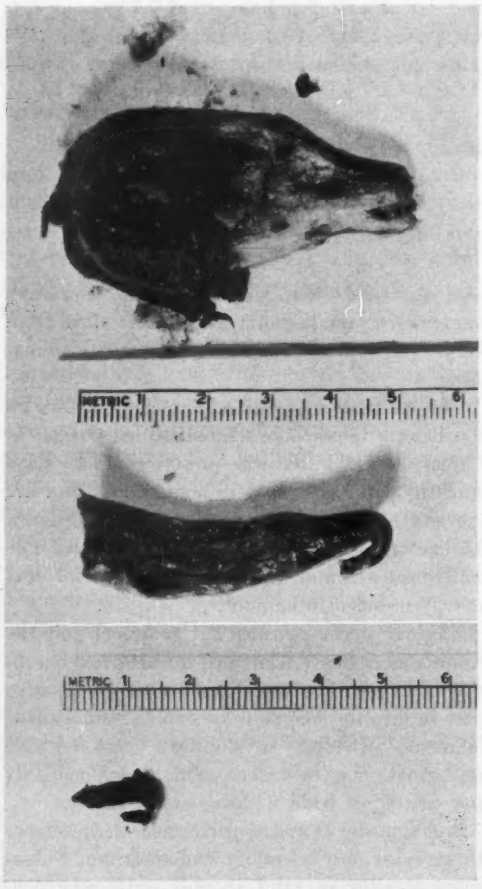


Figure 1. Comparative sizes of casts of uterus. TOP: Cast of uterus of a patient with three months spontaneous abortion, for comparison only. CENTER: Original cast passed by patient with membraneous dysmenorrhea before treatment in December, 1953. BOTTOM: Cast passed by patient August 8, 1959, on follow-up of treatment.

She continues to report herself menstruating regularly and with only mild cramping which she can tolerate well. On July 8, 1959, she reported that on only three occasions has anything approaching a membrane been passed, but it has been so small as to cause no discomfort. She continues to use only her vinegar douche. Representative pictures with dates will help the reader assess results in this case and realize why she is now menstruating symptom free (Fig. 1).

Discussion

It would appear to us that the use of an enzyme that will attack dead tissue is a logical approach to the therapeutic problem embodied in each case of membranous dysmenorrhea.

A case is sited in which a patient was rendered asymptomatic after a six year follow-up following the use of Varidase douches twice weekly for six months.

It would seem that once having broken the cycle of membrane formation in this case of membranous dysmenorrhea by the use of Streptokinase and Streptodornase douche, this patient's menstrual cycle was restored to normal.

To our knowledge successful treatment of severe membranous dysmenorrhea has never before been reported with so conservative means.

Dr. Tom Spies

Pioneer Medical Nutritionist

JAMES R. WILSON, M.D., *Winnetka*

One of the remarkable things about being a working medical nutritionist in the mid-twentieth century is the opportunity to know personally the discoverers, the adventurers, the heroes, the pioneers whose names will live forever as the dedicated men and women who have pushed forward the frontiers of nutritional knowledge. I have found it as exciting to know E. V. McCollum, Minot and Murphy, James S. McLester; Paul Cannon, William Darby, John Youmans, Conrad Elvehjem, and the many others of you who have ventured forth into the scientific unknown, as it would have been to have been on speaking terms with Christopher Columbus, Magellan, Sir Francis Drake, Father Marquette, and William Penn, all at the same time.

I wish to pay tribute to the career of one of these pioneers. When first we met, I am sure that neither of us had the slightest idea that our life work would revolve around food and nutrition. In fact, he had not as yet won the right to place those two hard-earned letters M.D. after his name, and my own M.D. was so new that I wore it like a neon sign. He was in that year of 1924 a beginning medical student at Harvard, while I was the youngest, and I might add the lowest paid, member of the faculty of that great institution.

By the summer of 1926 he had progressed to the professional estate that made it possible for him to serve as the physician's aide on the *S. S. George Washington,* shuttling between New York and Southampton, England; while I had by great economy saved enough dollars to be a third-class passenger on that same boat. Quite unexpectedly a few months ago among the mementos in our attic I found a sheet of *S. S. George Washington* stationery. That piece of paper had been signed by all the members of our merry shipboard party. The final name on the list is *Tom Spies, Ravenna, Texas.*

Our paths were to cross and recross, over and over again, for 36 years.

Never shall I forget a day I spent with Tom Spies not long after the publication of the book, "Vitamin B_1 and Its Use in Medicine," which he coauthored with Robert E. Williams. A survey of nutrition research centers took me to Tom's personal headquarters, the Nutrition Clinic of the Hillman Hospital, Birmingham, Ala. (which, I might add, has been a part of Northwestern University since 1950). What a day it was! It started early when I accepted Dr. Spies' invitation to accompany him on calls to his patients in the hill country. I listened while he imparted his enthusiasm for good nutrition to those people to whom poor nutrition had brought disaster.

At one mountain shack where we stopped, Tom promised me that I would hear a family speaking the Elizabethan English that their isolation had let them retain. This was one disappointment of my day, for we found only patient Betty at home, and she had a harelip and couldn't talk at all!

During the afternoon I shared with Tom the examination of his patients in the clinic, a tornado struck Birmingham. It was within hearing distance, but since it in no way distracted Tom Spies from concentration upon nutritional deficiency diseases, I had to act as though tornadoes were routine in my life too.

Tom Spies' death on Feb. 28, 1960, in the Memorial Center for Cancer and Allied Diseases has taken from our midst a dynamic, colorful, dedicated, and sometimes controversial pioneer of nutrition science, and to quote from a recent

Presented at the Joint Conference on Nutrition, Normal, Ill., Oct. 8, 1960.

Member, Illinois State Medical Society Committee on Nutrition, and Illinois Nutrition Committee.

The View Box

FRANZ GAMPL, M.D.
Chicago

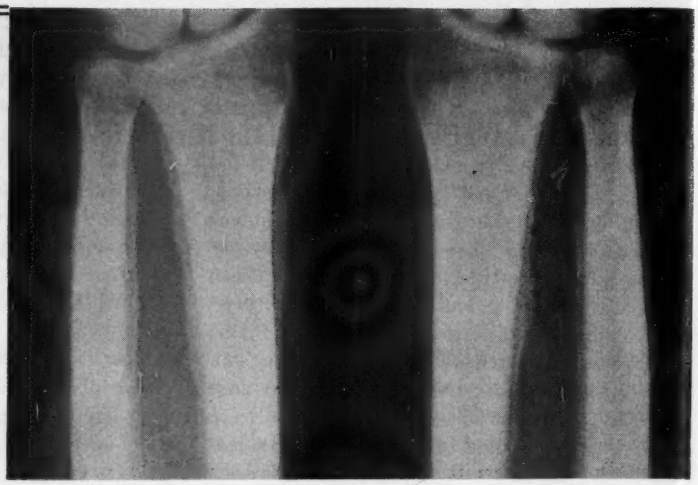


Figure 1. Roentogenogram showing both wrists and forearms.

A 40 YEAR old foundry worker was admitted to the hospital with complaints of progressive and gnawing pain in his wrists and legs. He also gave a history of precordial pain, night sweats, and cough productive of some white sputum in the morning. He denied hemoptysis. He was well until three weeks prior to admission.

The pain in his extremities was relieved by salicylates. The physical examination was noncontributory except for slight pitting edema of both ankles, pretibial tenderness, and slight swelling of his wrists. The fingers were not clubbed. The laboratory data showed a moderate hypochromic anemia and a leukocytosis.

What is your diagnosis:

Chronic osteomyelitis
Paget's disease
Osteoarthropathy
Rheumatoid arthritis

(*continued on page* 159)

Tom Spies (*continued from page* 155)

letter from Dr. Robert E. Williams, " . . . a thoroughly unselfish person." We are the poorer for our loss.

Perhaps the message Dr. Tom Spies would want us to have from his 57 years of life can be summarized in his own words, when in 1957 he accepted the Distinguished Service Medal awarded by the American Medical Association for his outstanding work in the field of nutrition, especially his study of the dietary requirements for the preservation of tissue integrity, whereby premature aging can be prevented:

" . . . to summarize, there is hope for some that are considered hopeless for we have learned that even the cells of the young and of the elderly cannot be said medically to be finished. Often they have been pushed into submission, partial or complete, but if given another chance by application of the newer knowledge of nutrition, they will again muster their strength and bounce back. It is characteristic of the cells of our bodies never to give up. Over and over again we have seen new remedies come to our aid and have observed the affected cells to fight back stubbornly and successfully. What does this prove? I feel it proves that when we know enough about nutrition and all its proper uses, disease will have less success in shortening our prime of life."

MEDICINE IN THE OUT-OF-DOORS

INSULATED CLOTHING

JULIUS M. KOWALSKI, M.D., *Princeton*

Cold weather clothing is becoming increasingly abundant and varied, and some claims made for it are, at times, confusing or outright contradictory. No clothing can produce heat, only conserve it — retard its dissipation from the body. Dead air is the most effective insulator against body heat loss, and moisture is the stealthy robber of it.

Through the years wool was peerless for one who had to brave winter's icy blasts. Sheepskin-lined clothes and boots were worn by many and served them well early in World War II. For general all-purpose outdoor wear it still holds a commanding position. It is relatively inexpensive, comes in a wide assortment of weaves, finishes and weights, is readily tailored to any need, and when dry, has excellent heat-retaining properties because of its resilient fibers and trapped air spaces. But several shortcomings are apparent. Outer woollen garments invariably need professional dry cleaning services and when soiled frequently, this cost must be considered. Wool is subject to almost constant insect predation which necessitates special protection and storage. Careful laundering is necessary to minimize shrinkage or misshaping; this will certainly occur from repeated washings. It will not endure steady, abrasive use, and it is not wind or water repellent. It dries slowly, as every camper will attest; there is nothing wetter than a pair of soggy woolen socks. But wool is still the trusty standby of the outdoorsman, be he farmer, utility man, or hunter.

For snuggling warmth, nothing can equal Grandma's goose down quilt. It was re-made and patched and handed down from one generation to the next. For good reason. No man-made substance even now can be compared to it for lightness and insulating qualities. In our relentless quest for this valuable commodity, several bird species have been driven to extinction. Waterfowl down is best for protection in zero and below temperatures, be it in outer garments or sleeping robes. It is very light, dries readily, and is the most compressible of the insulating materials. It can be laundered as well as dry cleaned, but it is subject to insect attack, though to a lesser degree than wool. It is pervious to wind and moisture.

The Air Force has under study currently down-filled arctic survival suits which are claimed to protect a man at 50° below zero. This is a hooded coat extending to the feet with draw strings to convert it into a "sleeper," or it can be shortened, using snaps, for walking. Down-filled boots with leather soles and matching mitts and a windbreaker parka and pants complete the outfit, all of which can be packed into a shoe-box-size container and weighs about seven pounds. These suits are available to the public in limited quantities. This demonstrates the versatility of down — a far cry from the heavy, multilayered woolens and pile-lined parkas of the flight personnel on the first Polar missions. Thus clothed, an uninjured man could survive for thirty days on the Arctic ice pack.

Outdoor gear has improved remarkably in the last fifteen years with the development of synthetic fibers. These are known under trade names of Acrilan, Dacron, and polyester fibers. Their insulating properties are good, wearing qualities better than wool; they launder and dry well, are not affected by insects, and are virtually indestructible. They, like wool and down, need an outer covering to repel moisture and wind. Presently they are used in insulated underwear, coats and pants, and sleeping robes. For rugged, con-

tinuous outdoor wear they have no equal, despite a slight weight increase over down.

None of the above fibers and fabrics are fully protective in themselves unless covered by a windbreaker. A waterproof parka worn over this type of clothing is best. On a calm day it can be removed to prevent excessive perspiration and allow ventilation. But reckon with the wind! Cold on a windless day is tolerable even when the thermometer reads zero, if one remains active. However, light and variable winds — two to five miles per hour — begin to waft away the covering of warm air that surrounds the body, and the discomfort increases with the wind velocity. Witness the numbed spectators leaving a football stadium on a November Saturday afternoon. Arctic gear should more properly be the order of the day. Circulatory damage to the extremities can follow quickly, ending in death due to exposure. The successful British assault on Mt. Everest was due in large measure to development of windproof fabric impervious to winds of 100 miles per hour. Such winds are an almost daily occurrence above 25,000 feet, and the temperature is constantly below zero.

Though cold tolerance depends on adaptation and psychological characteristics, we cannot withstand severe cold accompanied by incessant wind. Should such conditions arise, seek a shelter, and soon. Only the bison will face the storm; we, like our cattle, must present our backs to it. Protect the head and neck, wrists and ankles. If these three areas of the body are adequately protected, the remainder of the body will be comfortable.

When properly clothed, the rigors of winter hold no fears for us. Many cold weather activities formerly enjoyed only by a certain sub-species are now available to the many. The renaissance is here — thanks to better utilization of well known fibers, development of new ones, and an understanding of cold phenomena.

Eating—for the space man

How will the astronaut eat? What will he eat? These are problems of a practical nature. The answer to the first question is comparatively simple. The environment of the cabin will permit facile intake of food and drink except during the period of launch and during re-entry into the earth's atmosphere. However, weightlessness, in conjunction with many necessary protective measures, would make the conventional handling and eating of food somewhat difficult and awkward. Eating from a plate with knife, fork, and spoon will not be possible. A number of interesting phenomena would occur when ordinary methods of eating and drinking are employed in a space ship in a state of weightlessness. If a piece of meat should slip while being cut, it would fly off the plate and splatter against the wall, bounce back and then continue to bounce back and forth off the walls, ceiling, and floor. A fork full of peas raised to the mouth would continue in its upward flight to the ceiling and be reflected back, bombarding like buckshot. A cup of coffee raised to the mouth would result in the astronaut's receiving the contents in his face. To avoid these frustrating experiences, it is necessary to confine foods and liquids in containers from which they can be squeezed into the mouth. In lieu of the usual utensils, liquids and semi-solids can easily be served from collapsible "squeeze" tubes. Solids in bite size form can be removed by hand from a covered container and placed directly into the mouth. *Beatrice Finklestein, M. S. and Lt. Col. Albert A. Taylor, USAF. Food, Nutrition and the Space Traveler. Am. J. Clin. Nutrit. November-December 1960.*

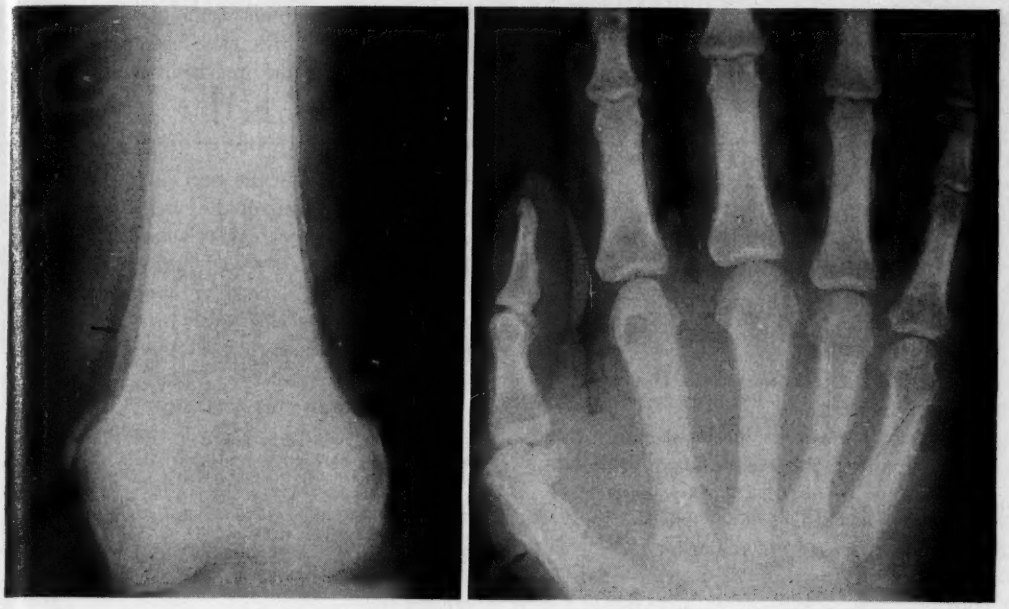


Figure 2. Involvement of tubular bones of the leg and hand showing thickening of the periosteum.

The View Box

—diagnosis and discussion (*continued from page* 156)

The considerable periosteal reaction involving all the visualized tubular bones of the upper and lower extremities is diagnostic of hypertrophic osteoarthropathy. This disease is also known as osteoarthropathia hypertrophiante pneumonique, and Bamberger-Marie.

The chest roentgenogram showed a middle lobe consolidation, which on bronchoscopy and biopsy proved to be secondary to an obstructing squamous cell carcinoma.

The syndrome of osteoarthropathy is characterized by thickening of the periosteum, lymphocytic and plasmo-cellular infiltration, osteoid formation with subsequent laminated calcification of the periosteal layers.

Any age group may be involved; however, it is rare in childhood and must be differentiated from nonspecific periostitis.

The clinical significance of the condition is that it may precede or coincide with the early stage of underlying disease:

1. Primary osteoarthropathy without underlying organic disease entity is rare (acropachydermia).

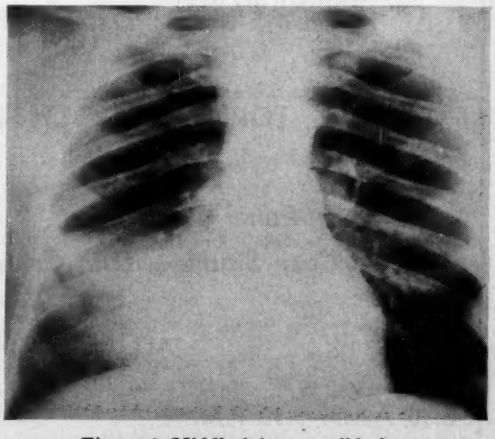


Figure 4. Middle lobe consolidation.

2. Secondary osteoarthropathies are seen in a variety of diseases:
   a. Chronic pulmonary suppurative processes and neoplasms (very uncommon in tuberculosis).
   b. Cholangitic cirrhosis and liver abscesses.
   c. Chronic diarrhea associated with ulcerative colitis, regional enteritis, and intestinal polyposis.
   d. Congenital heart disease (rare).
   e. Localized myxedema.

Differential diagnosis

Periostitis due to venous stasis (lower extremities, not symmetrical).

Syphilitic periostitis: most commonly involving tibias, rarely other osseous structures.

Nonspecific periostitis: not symmetrical.

Paget's disease: associated with bowing of the bone and coarsening trabeculation.

Cause of the syndrome is unknown, although a multitude of theories have been entertained such as toxic, endocrine, and neurogenic disturbances.

Prognosis

Prognosis is good for the secondary osteoarthropathies. After removal of the eliciting cause, or vagotomy, the bone pain may subside within 24 hours. More or less complete resolution of the subperiosteal bone, depending upon whether or not it has already become firmly incorporated into the cortex of the shaft, is often observed.

FURTHER READING

1. Skorneck, A. B., and Ginsburg, L. B.: Pulmonary Hypertrophic Osteoarthropathy (Periostitis): Its Absence in Pulmonary Tuberculosis. New England J. of Med. **258**:1079 (May 29) 1958.

2. Camp, J. D., and Scanlan, R. L.: Chronic Idiopathic Hypertrophic Osteo-Arthropathy. J. of Radiology **50**:581 (May) 1948.

April 19, 1960 Springfield

Third Annual

JOINT HOSPITAL CONFERENCE

Hospital Trustees, Chiefs of Staffs, Administrators

Sponsored by: ILLINOIS STATE MEDICAL SOCIETY
ILLINOIS HOSPITAL ASSOCIATION

TOPIC: **Hospital Utilization**

Panel Discussion *Workshop Sessions*

Case Study — 10th Councilor District, Pennsylvania

ALL PHYSICIANS WELCOME

8:30 A.M.—3:30 P.M. LELAND HOTEL

OFFICIAL BUSINESS

Statement on Policies and Programs On Health Care of the Aged

National events have focused increased attention on the health care of the aged. Long before this national interest was generated, the Illinois State Medical Society and its component county societies were aware of the specialized problems of health care for older people. At the state level and in many of the county societies special committees were appointed to look into these problems. At the state level we were instrumental in marshalling the resources of the hospital and dental and nursing home associations through formation of the Illinois Joint Council to Improve the Health Care of the Aged. Medicine and the allied professions have pledged themselves to a dedicated and continuing effort to meet all the health needs of the aged.

Much of this work has been overshadowed by the publicity surrounding efforts of certain national groups to incorporate health benefits into the social security system. To emphasize the work which the state and county medical societies have been doing and to set forth in one concise statement the policies and programs which medicine supports, the Council of the Illinois State Medical Society, in December, adopted a 12-point statement. The 12-points in brief are as follows:

1. Stimulation of Realistic Attitudes Toward Aging

The older individual should be maintained as a healthy participant in the family, civic, economic, and political life of the community, not isolated on the basis of arbitrary differences in age. Chronological age should not be the sole criteria for compulsory retirement. Such an attitude is vital to the physical and mental well-being of the aged. Every effort should be made to stimulate this proper attitude.

2. Responsibility of Financing Health Care of the Aged

The cost of personal health care is primarily the responsibility of the individual and his family. When these sources are not adequate, he should first look to his local community for help before resorting to governmental assistance. Federal participation should be limited to financial assistance to the states for locally administered and locally operated programs. The individual should be permitted and encouraged to remain self-supporting where possible. During the past two decades the economic problems of the aged have been intensified by erosion of the purchasing power of the dollar. All segments of the community, including government, should be encouraged to refrain from embracing activities which are inflationary in character and which, in turn, reduce fixed pension and annuity benefits of the older population.

3. Extension of Prepayment and Insurance

A majority of the people over 65 are not indigent. Within reasonable limits they can meet the costs of adequate health care from their own resources or by means of prepayment and insurance. Benefits and initial coverage have been expanded with the cooperation of the physicians of Illinois. Physicians will support further efforts to develop still better programs for older persons, both employed and retired, with appropriate attention given to the needs of patients requiring long-term and chronic care. Voluntary prepayment plans and health insurance can and

should provide the basis for meeting the health care costs of most people.

4. Contribution of Physicians to Low Income Groups

Traditionally physicians have provided care to their patients without regard for the ability to pay. Through hospitals, clinics, and a multitude of voluntary programs, physicians volunteer their services to the aged. The physicians of Illinois will continue, as they have in the past, to provide medical services to the aged, at fees they can afford or without charge, as the resources of these patients indicate. The society reaffirms its position that no patient, aged or otherwise, need go without adequate medical services by virtue of inability to pay.

5. Extension of Governmental Programs for Care of the Aged

Comprehensive health care is now available to indigent aged citizens of Illinois under old age assistance (OAA). The Mills-Kerr Bill as passed by the last Congress, when properly implemented in Illinois, will fulfill all additional governmental responsibility by providing medical care for the medically needy aged. The Illinois State Medical Society is currently cooperating in the development of such a program and urges its adoption in Illinois at the earliest opportunity.

6. Expansion of Skilled Personnel Training Programs

Increased emphasis is needed at all levels in the health field to provide adequate trained personnel to care for the growing number of aged. Training should be directed to all levels and with the total view of health as embracing social, psychological, and vocational aspects. Additional emphasis on recruitment of health workers is needed. The medical society and its Women's Auxiliary will continue existing efforts.

7. Improvement of Medical and Related Facilities and Services

More adequate facilities for the care of older people are needed, particularly in the fields of long-term and chronic care, rehabilitation, and neuropsychiatric care. Greater emphasis is needed for programs designed to maintain older patients in their homes where medical conditions permit, such as home care programs including homemaker services. The state society and its component county societies have supported the drive for more facilities and improved quality of care. These efforts will be continued and intensified where possible.

8. Promotion of Health Maintenance Programs

The society has long been on record as supporting the principles of good health maintenance, which includes such things as proper diet, exercise, and living habits in earlier years to insure healthier later years, regular physical check-ups, early detection and treatment of diseases or disability.

9. Wider Use of Restorative and Rehabilitative Services

Full use of rehabilitation and restorative services is essential to the care of the aged so that older persons who are ill or disabled may return to independent or partially independent living at the earliest possible time. The society's efforts to stimulate physicians and allied health workers in the use of these services will continue.

10. Leadership and Cooperation in Community Programs for Older Citizens

The society endorses community activities for older people such as may be found in churches, senior achievement groups, "Golden Aged Clubs," and day centers. Emphasis should be given to programs which integrate the older person with the community as a whole.

11. Extension of Research in Both Medical and Socioeconomic Aspects of Aging

Medicine will continue to encourage, support, and participate in research on both the medical and socioeconomic aspects of aging.

12. Increased County Medical Society Activity

The state society and many county medical societies currently have active committees on aging. All county medical societies are urged to form special committees to take local leadership in the development of specific programs to improve the health care of the aged.

E. A. Piszczek, M.D.
Chairman, The Council

Present Status of The Impartial Medical Testimony Rule

A report released on June 14, 1960, by Henry P. Chandler,[1] indicated that on May 31, 1960, there were 61,497 cases pending in the Circuit and Superior Courts of Illinois, and that more than 50,000 of them were suits for personal injuries. Subsequently, on Aug. 5, 1960, the Institute of Judicial Administration[2] reported that, although the average court delay in personal injury cases in the United States in 1959 was 11.1 months, the delay in Cook County, Illinois, was 70 months. Time, therefore, would seem to be taking its toll against those seeking their rightful day in court.

Several solutions are presently under consideration to alleviate the delay and congestion of cases in the Illinois courts. Among them is a Rule to permit Impartial Medical Testimony to be used at the instance of the court or counsel for either party to the litigation. The rule is welcomed by medical societies who have historically been interested in such a program because of their professional desire to improve the quality and standards of medical testimony. Medical societies are interested in the medical truth, honestly given, and uncomplicated by any considerations of partisanship or reward.

Should the rule become as valuable a tool in the Illinois court as it has in the United States Federal Courts, its effect will be invaluable in the determination of facts; in reduction of glamorized concepts of disability, damages, and the extent of injury or disease to a sensible level; in speed-up of the pre-trial process, and in settlements arrived at earlier and more equitably.

On Sept. 28, 1960, the Illinois Supreme Court approved the principle of Impartial Medical Testimony and appointed a committee of four lawyers to prepare a rule for adoption by the court. The committee was composed of Mr. Owen Rall, chairman, Mr. Bert Jenner, Mr. Peter Fitzpatrick, and the general counsel of the Illinois State Medical Society, Mr. Walter L. Oblinger. Subsequently, on Nov. 11, 1960, the committee submitted the following Rule to the Supreme Court of Illinois:

(Proposed)
Rule 17—2
IMPARTIAL MEDICAL EXPERTS

When in the discretion of a trial court it appears that an impartial medical examination will materially aid in the just determination of a personal injury case, the court, a reasonable time in advance of the trial, may on its own motion or that of any party order a physical or mental examination of the party whose mental or physical condition is in issue. The examination shall be made without cost to the parties by a member or members of a panel of physicians chosen for their special qualifications by the Illinois State Medical Society. A copy of the report of examination shall be given to the court and to the attorneys for the parties. Should the court at any time during the trial find that compelling considerations make it advisable to have an examination and report at that time, the court may in its discretion so order. Either party may call the examining physician or physicians to testify, also without cost to the parties. The court shall determine the compensation of the physician or physicians.

At the time the Rule was submitted, the court also heard opposition to the plan from Mr. Peter Fitzpatrick, who represented the viewpoint of certain plaintiffs' attorneys in Chicago. Following Mr. Fitzpatrick's argument, Mr. Oblinger presented a short rebuttal and then entered a plea for the enlargement of the rule to include some provision for its administration.

As the matter now stands, the court has before it Proposed Rule 17-2 and is expected to act upon it during the March Term of court.

CLAUDE C. GUSTINE
Associate Counsel
Illinois State Medical Society

1. *State Court Administrator, now retired, June 14, 1960.*
2. *A non-profit organization with headquarters at the New University Law Center.*

EDITORIALS

The philosophy of modern physicians

Modern physicians and with them the whole organization of medical services in the United States are being weighed and judged. Since the most important characteristic of any individual is his philosophy, it is reasonable to inquire into the philosophy of the modern physician, and it is more reasonable that the modern physician inquire into his own philosophy and that he judge himself. To do this he must first decide what should be the philosophy of the good physician. It is, of course, what has been the philosophy of the good physician always. Before and above all else, it is the philosophy of the good man, and of this no better standard has ever been set than the Golden Rule — "To do unto others as you would have that others should do unto you."

If he follows this rule with sympathy and understanding, he will realize that his profession is also a calling and that his function in society is what the function of the physician has always been, — "to heal the sick, to relieve pain, and to abolish fear."

He will first of all see to it that he is skilled in his profession so that the trust his patients have placed in him is well placed.

He will regard each patient as a fellow human being who has come to him for help.

He will forget, as far as possible, that they are sources of income.

He will not keep them coming back to him for unnecessary visits or for injections of medicine which could as well be prescribed by mouth or which the patient could inject for himself.

He will not advise unnecessary operations.

He will not split fees.

He will adjust his fees, not on the basis of the services rendered, but on that of the patient's ability to pay without financial hardship, so that each patient will be happy to pay them.

Knowing that his function is to heal the sick, he will treat the indigent for nothing, the poor for little, and others for what fits reasonably into their income.

This I believe is the philosophy of the good physician. He who lives by it will be happy and successful. Were all physicians to practice it, the profession as a whole would have nothing to fear, and the public would not be led into the dangerous experiment of socialized medicine.

Jerome R. Head, M.D.

Chromosomal aberrations

The study of genetics was given impetus in 1956 when it was found that the normal human somatic cell contains 46 chromosomes instead of 48. The breakthrough occurred when the squash technic was developed to identify chromosomes. The adaptation of cell culture to chromosomal analysis, introduced in 1958, allows investigators to cultivate minute tissue biopsies that yield proliferating cells for study of their chromosome patterns.

Mitosis is arrested in metaphase by colchicine. Hypotonic saline is added to make the cells swell and to help in dispersing the chromosomes when slight pressure is applied on the glass slide (squashing). The dispersed chromosomes are stained, and the karyotype is determined after analysis is made. The chromosomes split, with each half attached to the other at a characteristic point. The pairs have been identified and aberrations studied for their possible clinical significance.

Various congenital and other disorders have been traced to mismatched chromosomes. Mongolism appears to be associated with an extra autosomal chromosome, whereas in Marfan's syndrome there is enlargement of the satellite of an autosome. An extra chromosome has been noted in some acute leukemias, and characteristic chromosomal aberrations occur with Kleinfelter's

(primary microrchidism) and Turner's (gonadal dysgenesis) syndromes.

The "super female" has an extra X chromosome (XXX). Until recently, this three X-er was observed only in the fruit fly, but an example turned up recently in a study on human cells. The patient was not a Marilyn Monroe or a Gina Lollobridgida but quite the opposite. This individual had underdeveloped breasts and infantile pelvic organs, and could not reproduce.

Other genetic defects include certain blood dyscrasias and metabolic disorders. Resistance to disease and to degenerative disorders also may fall into this category. The same can be said of susceptibility to rheumatic fever and hypertension. More recently, cancer researchers working on lung cancer tissue found an average of 79 chromosomes.

The future of genetics becomes brighter with each new discovery. It is reasonable to assume that man will find a way to produce a perfect matching of the chromosomes in order to prevent mongolism, certain mental and congential disorders, and problems of intersex. Scientists have uncovered some of the secrets of the complex substances that compose the genes, including DNA (deoxyribonucleic acid). Current research is stressing this chemical and its role in the makeup of the gene.

Solving nurse and intern shortages

The nursing situation becomes more critical as thousands of new hospital beds are being added to accommodate the increasing population and the greater demands for medical services. Recruitment continues, and refresher courses in nursing are offered in Chicago to encourage the thousands of inactive nurses throughout the metropolitan area to return to active duty. A total of 358 nurses have completed the refresher courses in the past three years.

Meanwhile, the National League for Nursing raises its standards, and institutions that fall below the line are closed. The 4-year collegiate school of nursing appears to be their aim, to which we cannot object except that they may educate themselves out of business. The practical nurse appears to be the answer to the current problem. More facilities should be available for training these people in order to maintain a high standard of nursing care.

Many hospitals are plagued also by a shortage of interns. There are many ways in which this problem can be solved, but not in the immediate future. Teaching hospitals, for example, could rely on clerks and residents. The recent graduate interns in a nonteaching institution. The second plan is to build more medical schools so that the number of graduates would approximate the number of available internships. The latest suggestion was made by Dr. Charles L. Hudson of Cleveland at the recent 57th Congress on Medical Education and Licensure. He suggested that we develop a physician's aide with sufficient training to serve as an intermediary between the hospital technician and the physician. He would be, in effect, a permanent extern hired to be of service.

This would require a curriculum consisting of two or three years of prescribed medical courses. The training would resemble that given to graduate students and nurses. The program would be designed and supervised by the college and would lead to a bachelor of science in medicine or bachelor of medicine degree upon successful completion of the course. The demand for this type of assistance would be tremendous.

Presenting the problem of smoking

"To smoke or not to smoke" is the question which arises daily in many offices where people with gastrointestinal disturbances and particularly peptic (gastro-duodenal ulcers) are seen. How should this question be answered, and is the same answer applicable to all such patients?

A review of data on the effect of smoking on the physiology of the G.I. tract reported by many observers fails to present the clinician with a nonrefutable answer to the above questions, but it offers him a basis for an intelligent discussion of the presenting problem.

Before proceeding with the evaluation of our data, it must be stressed that the effects of smoking are not as clear-cut as those of nicotine, because some of the effects of smoking may be attributed to other substances present in tobacco, e.g., pyridines, volatile acids, and tars. While the smoke from one cigarette may furnish 6 to 8 mg. of nicotine, only part of this amount is usually absorbed, depending upon the moisture of the tobacco, the speed of the smoking, the depth of inhalation and the presence of a filter or cig-

arette holder. The amount of nicotine absorbed depends also upon whether pipe, cigar, or cigarette is smoked (Goodman and Gilman, 1955).

Accordingly, some observers, (Gray, 1930, Friedrich, 1934, Crohn, 1938, Steigmann et al, 1954) found increased gastric secretion and acidity. Others (Ehrenfeld and Sturtevant, 1941) found that after smoking there is an increased response on the part of the stomach to test meals (alcohol). Another group (Batterman and Ehrenfeld, 1948) found that smoking decreased the effectiveness of antacids. The gastric secretion and motility were found by some observers to be influenced by the mood of this patient during smoking. On the other hand, some observers failed to find increase of acidity after smoking; indeed, some noted even depression (Schnedorf and Ivy, 1939, Johnson, 1929). Others noted no significant difference between the patient who smoked and those who refrained (Cooper and Knight, 1956, Schlicphake and Simmet, 1944, Hodges and Gilmour, 1950). Still others noted no difference in the effect on gastric acidity when standard or denicotinized cigarettes were used (Gray, 1930, Ehrenfeld and Sturtevant, 1941, Ivy et al, 1950).

More recently, however, a definite increase in gastric acidity was found in both hospital controls and peptic ulcer patients following smoking (Steigmann et al). These workers also noted that in both groups of subjects the increase in the acidity was more frequent and at higher levels following the smoking of one ordinary cigarette than of a filtered one. Moreover, they noted that gastric motility seemed to be less affected by smoking. Thus, antral motility was increased in two, decreased in three, and unchanged in five after two ordinary cigarettes, but increased in one and unchanged in nine after two filtered cigarettes. The fundic motility, however, was similar after both types of cigarettes. They, therefore, postulated that the decreased motility with the resultant poorer gastric emptying may result in increased gastric acidity. Similar observations on gastric motility after smoking were also made by others (Schnedorf and Ivy, 1939, Batterman, 1955, Cooper, Harrover, Stein and Moore, 1958).

The aggravation of dyspeptic symptoms by smoking has been reported by several authors (Hurst and Stewart, 1929, Bockus, 1944, Schindler, 1947), mainly on clinical grounds.

Recently, however, a careful study (Doll, Avery-Jones, and Pygott, 1956) of a larger series of patients and controls seemed to indicate that there were fewer nonsmokers among ulcer patients; that the male ulcer patients began to smoke at an earlier age and that more ulcer patients smoked only cigarettes. It was also noted that in the patients who were advised to stop smoking, the ulcer healed more rapidly. The conclusion from the above observation was that smoking interferes with the healing of a peptic ulcer and helps to maintain its chronicity.

In another study it was found that the mortality from peptic ulcer was lower among nonsmokers, and increased with the amount of tobacco smoked (Hammond and Horn, 1958). On the other hand, it seems that the distribution of peptic ulcer mortality is not like the distribution of tobacco smoking, so that the latter may not be direct cause of ulcer but rather contributory to chronicity, by interfering with healing. A direct causation between ulcer and smoking, however, seemed to have been shown in dogs (Toon, Cross, and Wangensteen, 1951).

The effect of smoking on the intestinal tract is less well known. Some found no effect on the colon from smoking one cigarette; however, other workers have noted that smoking augments the motor activity of the colon (Schnedorf and Ivy, 1939). The observations of some patients that a cigarette after breakfast promotes defecation has hence a pharmacological basis. These findings would therefore suggest that patients, who a priori have a motor neurosis, e.g., irritable bowel, colitis, etc., would be better off not to smoke.

The few studies to date on the effect of smoking on the biliary tract and pancreas have failed to show any effect (Schnedorf and Ivy, 1939, Koehler et al, 1947). Similarly, there are no conclusive data on the effect of smoking on appetite and digestion, although some patients claim that they gain weight when they stop smoking (Koehler et al, 1947).

The brief review of some of the opinions concerning the physiologic effects of smoking (nicotine) on the gastrointestinal tract demonstrates the predominantly unfavorable results of smoking on this system. While there may be differences in the effect and in the individual, one cannot escape the conclusion that for patients with gastrointestinal disturbances it might be better

not to smoke. The majority of patients will follow their doctors' advice for reducing or stopping the smoking habit if the clinicians would clearly present to them the problem involved and the gains to be had from such an action.

Frederick Steigmann, M.D.

Time for action

Many forces are trying to change the physician profile in order to downgrade organized medicine and promote socialistic medicine.

Aime Forand, former Democratic representative from Rhode Island, let the cat out of the bag when he stated, "If we can only break through and get our foot inside the door, then we can expand the program after that."

The Forand type of legislation is not dead. We cannot afford to relax, because President Kennedy has committed himself before Congress in favor of this type of legislation. In addition, we members of the profession must cooperate fully with the new Federal-State program—the Kerr-Mills Bill—for medical care of needy and near-needy older persons. Illinois must participate as soon as possible.

Avoiding malpractice suits

A set of precepts to help physicians avoid involvement in malpractice litigation was suggested by Dr. Russell S. Fisher, Baltimore, Chief Medical Examiner of Maryland, to a recent scientific meeting here of the Utah State Medical Association. His advice includes the following:

1: You don't have to accept a patient. But once you invite him into your examination room, take a history, and do a physical; he is in your charge.

2: Do not terminate care too soon or fail to have another physician look after your patients if you are going to be away.

3: Keep your patients well informed of their condition and what hazards may be involved in certain treatments.

4: Always take *x*-rays in cases of bone or joint injuries.

5: Use the ophthalmoscope and other medical aids whenever indicated.

6: Give tetanus antitoxin in cases involving penetrating wound, even though the patient may have been immunized previously with tetanus toxoid.

7: Be sure that there has been an accurate crossmatching before administering a blood transfusion.

8: Don't neglect to make frequent blood studies, such as clotting time determinations, whenever anticoagulants are being given.

9: If you are a surgeon, be sure you have the patient's or guardian's consent for the surgery you are to perform.

10: Tell your patients you will do the best you can for them, but don't promise too much.

11: Take care in the selection of assistants and the duties delegated to them.

Dr. Fisher urged physicians to avoid criticism of colleagues. *Russell S. Fisher, M.D. Precepts Set Up on How to Avoid Malpractice Suit. Medical Tribune. Oct.* 24, 1960.

Correspondence

DEAR DR. RATNER:

Thank you very much for the reprint of the magnificent panel discussion on polio vaccines, originally published in the Illinois Medical Journal. I look forward to receiving the bibliography and can only regret that the Journal did not include the bibliography along with the text.

The panel discussion you so ably moderated seems to me to bring together in one place the most impressive indictment of the Salk vaccine that I have seen. This has been the unanimous opinion of the people here to whom I have shown the reprint. We are all apprenhensive lest the information be lost to large segments of the public by reason of the limited circulation of the medical journal. The handling of the Salk vaccine seems to me to have important implications for the future handling of scientific problems in this country.

Sincerely,
LOUIS LASAGNA, M.D.
Co-Editor,
Journal of Chronic Diseases

AT THE EDITOR'S DESK

More Shotgun Mixtures

There is an increasing tendency among drug firms to combine old remedies and call them new products. Plaquenil, for example, is effective against arthritic symptoms. So is aspirin. Winthrop Laboratories recently combined the two and calls it Planolar. We have a hunch that the consumer will pay more for that combo than he would if he bought the two drugs separately.

Plaquenil sulfate, 200 mg. tablet, sells for approximately 15 cents per tablet, whereas a penny will buy a 5 grain aspirin. Planolar costs 7 cents per tablet, but it contains only 60 mg. of plaquenil which is 1/3 that in the 200 mg. tablet.

Winthrop went a step farther in developing a new prescription tablet that they claim will control all cold symptoms. This is Win-Codin, an ethical mixture of codeine, Neo-Synephrine, aspirin, chlorpheniramine maleate, and ascorbic acid.

Our main objection to shotgun mixtures is that they are not aimed at the underlying disease nor the most distressful symptom. All too often the dosage of each drug in the mixture varies from a twelfth to half that required to relieve a specific symptom. Under these circumstances a single ingredient at full strength might bring faster relief. Your editor could be wrong, considering the popularity of these products. There are 600 ethical and over-the-counter cough remedies, most of which are of the shotgun mixture type. According to Medical Letter, "Whatever the mechanism of the cough disturbance, some pellets from the shotgun, it is hoped, will reach the target."

Process Speeds Radiography

The Polaroid Corporation has a new radiographic process that produces finished pictures in 10 seconds. The new process "MD/RR" is 10 to 15 times more sensitive than conventional radiographic technics and reduces x-ray exposure by approximately 80 per cent.

Cover for Massive Burns

Synthetic skin grafts have been maintained on animals for periods up to 104 days. Dr. William M. Chardack from the VA Hospital in Buffalo used a combination of Polyvinyl sponge and silicone rubber for this purpose. It is rigid when dry but becomes soft, pliable, and elastic when moist.

As the graft takes, the surgical sponge is permeated by the tissue and becomes adherent within a few days. The coating of silicone makes it waterproof.

Dr. Chardack will use this synthetic skin to cover burned areas too large to cover with the healthy skin of the victim. It should prevent fluid loss and infection.

Computer's New Score

The "play on words" department gives its award this month to Remington Rand. They have a news release entitled, "UNIVAC to Reduce Infant Death and Disease." These computers are wonderful. We hope the data collected will do just that.

Neoplasms in A-bomb Survivors

The following summary was reported by the research committee on tumor statistics, Hiroshima City Medical Association.

"The 1957-58 incidence of neoplasms among the survivors of the Hiroshima A-bomb varies directly with radiation dose, insofar as it may be inferred from distance from the hypocenter at exposure. The incidence of all malignant neoplasms among the survivors who were within 1000 meters is more than 4 times that of the nonexposed population. The incidence of benign neoplasms among the survivors exposed within 1500 meters is also significantly higher than that among the nonexposed. For survivors under 1500 meters there are significant differences between

the number of observed cancers of the lung, stomach, uterus, and ovary and the expected cases calculated from the age-specific rates of the nonexposed portion of the Hiroshima population. The increased incidence among survivors within 1500 meters is not related to sex or age."

Payola Seekers

We are familiar with the speaker at medical conventions who pads his paper with data from outdated texts and meaningless statistic. These are payola seekers, according to Dr. Hugh Smith of Memphis. They gain the reward of attention by wasting the time of other people.

Dr. Smith made this point at the Miami meeting of the American Academy of Orthopedic Surgeons. He mentioned other forms of payola including the malignant type which is carried out in the office by the man who fuses every aching back and charges what the market will bear.

He wanted to make it clear, that there are legitimate rewards for honest effort, but they do not come from the shoddy, the lazy, the dishonest, nor the selfish.

Moving X-ray Pictures

Zenith has a new pulsed x-ray system for taking motion pictures of high speed phenomena. The exposure times are one millionth of a second or less and only 1/4000th of a second apart. An idea of its "stop motion" capability was demonstrated with a speeding bullet travelling at 4,000 feet per second. It was "stopped" in flight by flash x-rays; a second exposure of 1/4000th of a second showed the same bullet about one inch further along in flight.

The machine should offer the radiologist new information which x-ray films still can't provide. This applies to the lungs, heart, blood vessels, and other moving systems. It also has many industrial uses. The price is in the forty to fifty thousand dollar range. There was no hint in the report of an "only one to a customer" sort of a deal.

The Dentist's Work-Week

According to the ADA, dentists average 43.1 hours a week at the office. Of this time, 34.2 hours are spent at the chair, 3.8 hours devoted to laboratory work, 2.5 hours are consumed by other work, and 2.6 hours are free time.

The survey showed also that the number of days absent from work because of illness varied from 1.1 annually for dentists under 30 to 5.6 days for dentists in their sixties. More than two thirds of the dentists over 60 and half the dentists in their thirties had not lost time because of illness. We assume from this that only the healthy dentists survive or perhaps that dentists get stronger with age.

Early defense

A comparison was made on baby pigs receiving their mother's milk and those on an experimental diet. The latter included cow's milk, simulated cow's milk, amino acids, short-chained peptides, vitamins, and minerals. The piglets on the real McCoy developed mature serum profiles within 14 days. Those on cow's milk required four to seven days longer. Those on the artificial cow's milk took even longer; many developed diarrhea and died.

The research project hints that mother's milk helps build the young animal's antibody defense against disease.

Smallpox Control Measure

Hereafter all travellers arriving from Cuba will be required to show evidence of valid vaccination for smallpox. Although smallpox is not known to exist in Cuba at present, the Surgeon General said the action is necessary because exemption from immunization requirements can be maintained only when there is close liaison between the Public Health Service and the official health agency of the exempt area. Since direct accessibility to health information is no longer available, quarantine regulations must be applied to Cuba to minimize the danger of the introduction of disease into the United States.

Absorbable Hemostatic Material

Surgicel is Johnson & Johnson's new surgical absorbable hemostatic agent. The dressing is a synthetic cellulosic fiber made from an oxidized regenerated cellulose. It is used to control troublesome bleeding or oozing from raw surfaces where no blood vessels can be clamped or con-

trolled with electrocautery. The dressing is said to be safe and effective as absorbable hemostatic material. It was used successfully in the control of bleeding from fabric grafts in vascular surgery and from retropleural and retroperitoneal surfaces.

Automatic Cell Counter

A new, economically priced optical-electronic cell counter has been developed by Sanborn Company for use in large and small laboratories. It is reported to count red and white cells accurately, more rapidly, and with less operator fatigue. Total cells sampled is about 50 times that of a manual count. Readout is direct without need for conversion or correction factors.

The Statistical Corner

• There are 236,089 physicians in the United States, a ratio of 133.4 per 100,000. The trend is definitely toward specialization. There are three and one-half times more full time specialists and five times more physicians in federal service than there were in 1931, but the number of M.D.'s in general practice has declined.

• The accident toll is approximately the same as it was last year (92,000). Motor vehicles were responsible for the loss of approximately 38,000 lives. Accidents in and about the home took 26,500 lives—an increase of 500.

Less Money for Less You

A do-it-yourself, measured calorie drink, 95 per cent identical to those bought over grocery and drug counters, can save dieters $25 a month. It is being publicized by Mr. Vic Friedman of V. E. Friedman Associates of New York, and we take no credit for the cost of each item nor his chemical experience.

The recipe: Dissolve one multi-vitamin pill (2 to 3¢) in one quart of chocolate milk (about 25¢). Add 1½ ounces of powdered milk (4¢). The mixture is reported to contain twice as much of vitamins A, B, and B_{12}; twice as much iron, riboflavin, thiamine. The powdered milk (an ounce and a half of calcium caseinate) fortifies calories, protein, and calcium. To check this, he says, get the U.S. Department of Agriculture Handbook 8—and read the vitamin bottle label.

We hope Mr. Friedman has tried to make this formula in his kitchen before recommending it.

FDA Drug Labeling Regulations

Labeling used to promote sale of prescription drugs to physicians, originally proposed by the FDA, have been somewhat modified.

Major changes required by the new regulations are:

1. Labels of drugs for injection must declare the quantity or proportion of all inactive ingredients. Previous regulations have not required quantitative declaration.
2. Labels of prescription drugs will have to bear identifying lot or control numbers from which it is possible to determine their manufacturing history.
3. Any labeling of prescription drugs or devices including promotional literature mailed or given to physicians by company representatives which furnish information about uses or dosage must contain complete information for professional use, including information about any relevant hazards and conditions in which the drug should not be used.

However, this will not apply to so-called "reminder piece" literature which merely mentions the name of the drug but does not give indications or dosage recommendations.

4. If the drug is new, information about uses, dosages, hazards, and contraindications must be substantially the same as that contained in the application to market the drug.

Advertising or oral detailing for a new drug may offer it only for use under the conditions specified in the labeling contained in the application to market the drug.

Labeling or advertising which goes beyond the claims approved in the labeling must be resubmitted for approval in advance of use.

5. Labeling bearing information about uses and dosage must show the date of issuance or latest revision.

Required changes on labels and cartons and the dating of labeling for professional use became effective on March 9, 1961. All other changes including the requirement for full information for use and disclosure of the hazards of the drug in promotional labeling mailed or detailed to physicians, became effective on Jan. 8, 1961.

ANNOUNCEMENTS

Radiation installation defects

The Illinois Department of Public Health reports it found defects in 51 of 160 industrial radiation installations surveyed to date. Eighty-one per cent of the defects have been corrected, and the remaining 19 per cent are being corrected.

The radiation inspection program was begun by the state department of public health last year, making Illinois one of the first states to enact and implement a radiation protection act. All 270 industries in the state with radiation installations are registered by the department; 110 are yet to be inspected. Trained radiological health experts determine if radiation devices are being used in accordance with provisions of the act.

Defects in equipment most frequently involved inadequate filters, poor shielding, over-exposure, no warning light, and contamination. The largest number of defects was found in industrial medical clinic x-ray machines, with industrial x-rays next in number.

Aid to Cuban physicians in U.S.

Cuban physicians and surgeons relocating in the United States since diplomatic difficulties with the Castro regime are being aided financially and with job offers by the International College of Surgeons, according to Dr. Walter F. James, executive director of the college.

The college and individual members are contributing to a special fund through the Leonard Wood Memorial Fund for Relief of Cubans, distributed by the Department of Health, Education and Welfare, with the final approval of its new head, Gov. Ribicoff.

HEW has disclosed that there are 66,000 displaced Cubans in this country, many of whom are physicians and surgeons now doing odd jobs or manual labor. Even though these doctors cannot practice in this country until accredited, the college has enlisted the help of its surgeon members to find jobs for them requiring technical skills in hospitals and clinics throughout the United States.

The University of Miami School of Medicine at Coral Gables is now offering postgraduate training for these refugee physicians.

Symposium on Delinquency

The Chicago Pediatric Society's monthly meeting will be held in the Auditorium of the Nurses' Home of Children's Memorial Hospital on Tuesday, March 21 at 8 p.m. Joseph D. Lohman, treasurer, State of Illinois, will speak on "Sociological Aspects of Juvenile Delinquency," and Dr. James B. Gillespie, Carle Hospital Clinic, on "Medical Aspects of Juvenile Delinquency." It is an open meeting.

Academy of Pediatrics session

The spring session of the American Academy of Pediatrics will be held at the Sheraton-Park Hotel in Washington, D.C., April 10-12.

In addition to individual papers to be presented, panel discussion will take up "The Role of Viruses in Respiratory Tract Disease;" "Placental Transfer of Noxious Agents;" "Common Gastrointestinal Problems;" and "Clinical Implications of Enzyme Maturation." Several television presentations also have been scheduled.

The banquet will be on Tuesday.

Course in neuromuscular diseases of children

The Cook County Graduate School of Medicine announces a two-week intensive course in Neuromuscular Diseases of Children with Spe-

cial Emphasis on Cerebral Palsy, to be given by Dr. Meyer A. Perlstein June 12 to June 23. This is an intensive didactic and clinical course designed for pediatricians, orthopedists, neurologists, psychiatrists, and physiatrists.

Emphasis will be placed on the practical clinical aspects of treatment and rehabilitation procedures. The course will include trips to demonstration clinics and treatment centers. The fee for the course is $285.

Since registration will be limited, applications should be made as far in advance as possible. For further information, write John W. Neal, Registrar, Cook County Graduate School of Medicine, 707 S. Wood St., Chicago.

Medical Assistants proceedings

A compilation of speeches on medical office management and patient relations given at the second annual convention of the American Association of Medical Assistants in Dallas, Texas, last October is now available on request. To obtain copies of the proceedings write Department PR-1, Lakeside Laboratories, Inc., 1707 E. North Ave., Milwaukee 1.

Chicago Urological Society meeting

Dr. J. Kenneth Sokol will deliver the president's address before the society meeting at the Morrison Hotel April 12 at 7:30 p.m. Three candidates' theses also will be presented.

At the March program of the society a symposium, "Hydronephrosis Secondary to Ureteropelvic Obstruction," was moderated by Dr. Cornelius W. Vermeulin, University of Chicago. Participants were Dr. Ormond S. Culp, Mayo Clinic; Dr. Frank C. Hamm, State University of New York, Brooklyn; Dr. Frank Hinman, Jr., University of California Medical Center, San Francisco; and Dr. Robert Lich, Jr., University of Louisville.

Gastroenterologist's regional meetings

The Southern Regional Meeting of the American College of Gastroenterology will begin in Houston, Texas, on Sunday, March 19 in the Jesse H. Jones Library Building of the Texas Medical Center. The chairmen are Dr. Ralph E. Eichhorn, Houston, and Dr. H. B. Eisenstadt, Port Arthur, Texas.

The Western Regional Meeting of the College was held in San Francisco on Sunday, March 5 in the Fairmont Hotel. Dr. Samuel W. Yabroff, Oakland, will be chairman.

To obtain copies of the programs write the Secretary, American College of Gastroenterology, 33 W. 60th St., New York 23.

Ob-Gyn. meeting

The annual meeting of the Illinois Obstetrical and Gynecological Society will be held Monday May 15, the day preceding the sessions of the Illinois State Medical Society, in the Sherman Hotel.

Mark your calendar and look for the program in the next issue of the Journal.

International College of Surgeons lectures

The 1960-61 season's series of lectures for the International College of Surgeons continues on April 4 with Dr. Alexander Rytel's presentation on "Polish Contributions to Medical Science" at the Hall of Fame. He is president of the Polish Medical Alliance in Chicago.

On April 18 Dr. Philip Thorek, surgeon-in-chief and administrator, American Hospital, will speak on "Food for Thought," and on May 23 Dr. William B. Serbin, senior attending obstetrician-gynecologist, Chicago Wesley Memorial Hospital, will end the season with a lecture on "Physician Signers of the Declaration of Independence."

All programs begin at 8:00 p.m.

International Congresses

The International Congress of Allergology will be held at the Hotel Commodore, New York City, October 15 to 20. At the main meetings there will be simultaneous translations of all papers in English, French, German, and Spanish. Prominent physicians and scientists from all parts of the world have been invited to take part in conferences, symposia, and panel discussions. Among the subjects to be presented are genetics in allergy, acquired tolerance, transplantation immunity, drug hypersensitivity, contact allergy.

general mechanisms in allergy, mechanisms of antibody fixation, delayed hypersensitivity, auto immune processes, steroid therapy, and new methods in allergy.

Entertainment is being arranged with several receptions, a banquet, and a program for the ladies.

The registration fee for members will be $45, for wives, $20. It includes the printed proceedings and admission to the receptions. Persons interested in obtaining additional information should write to Dr. William B. Sherman, 60 E. 58th St., New York 22.

The Inter-American Congress of Radiology will be held in Sao Paulo, Brazil, September 3 through 9. Scientific sessions will be in three categories: radiodiagnosis, nuclear medicine, and radiotherapy. A series of seminars, symposia, and conferences within the three congress categories are planned, in addition to individual papers and essays.

Two basic trips of 18 and 26 days each through Brazil and Latin America are available for college members and their families from the Lee Kirkland Travel Organization, Kansas City, Mo. Special travel schedules may also be arranged through the agency.

For further information write the Lee Kirkland Travel Organization, 1231 Baltimore Ave., Kansas City 5, Mo.

Medical clinics officers

The American Association of Medical Clinics at its annual meeting in New Orleans elected the following officers: Dr. Harold D. Caylor of the Caylor-Nichel Clinic, Bluffton, Indiana, president; Dr. Bernard A. Watson, Clifton Springs Sanitarium Clinic, Clifton Springs, N.Y., president-elect; Dr. John R. Hand, Portland (Ore.) Clinic, second vice president; and Dr. Joseph B. Davis, Davis Clinic, Marion, Ind., re-elected secretary-treasurer.

Surgical clinic

Prof. Ian Aird, University of London, and director of the surgical unit, Post Graduate Medical School, London, England, and Robert M. Zollinger, M.D., chairman, department of surgery, Ohio State University, will conduct a three-day clinic at the Cleary Auditorium, Windsor, Ontario, Canada, April 26-28. The registration fee is $25. Accommodations are available in Windsor and Detroit.

This meeting is sponsored by the Essex County Medical Society and the Ontario Medical Association. For information, write: Registrar, 301 Canada Bldg., Windsor, Ontario.

PG program in Israel

The University of California School of Medicine, in cooperation with the Hebrew University-Hadassah Medical School in Jerusalem and the Beilinson and Tel Hashomer Hospitals in Tel-Aviv, is offering a clinical postgraduate program in Israel April 20 through May 7.

The program offers an opportunity for physicians from the United States to visit in the homes of Israeli physicians and to participate in numerous social events which have been planned, in addition to attending the medical program.

For further information write Mrs. Bettie Minifie, Assistant Head, Continuing Education in Medicine and Health Sciences, University of California, University Extension, Los Angeles 24.

Teaching film on allergy

"Frontiers of Allergy" is a new 16 mm 25-minute color sound film supported by Schering Corporation, pharmaceutical manufacturer, and made with the technical guidance of Dr. Leo H. Criep, clinical associate professor of medicine, School of Medicine, University of Pittsburgh.

It affords a visual presentation of the over-all subject of allergy from its basic mechanisms to methods of treatment. All of the live sequences were photographed in Pittsburgh at the VA Hospital, Montefiore Hospital, and the University of Pittsburgh.

The film includes both a basic science and clinical approach to the subject of allergy. It may be obtained on loan without charge by writing to the Audio-Visual Department, Schering Corporation, 1011 Morris Ave., Union, N.J.

Basic course in ophthalmology

The Chicago Ophthalmological Society has organized a full-time residency preparatory Basic Course in Ophthalmology to be conducted

once each year. The first starting date will be July 10. The course has been designed primarily for physicians planning to specialize in ophthalmology. It has been planned to run for five months.

Cooperating in the planning and presentation are Chicago's five undergraduate medical schools, several of the teaching hospitals, and Cook County Graduate School of Medicine. Registration will be limited to thirty graduate students. For further information write to Registrar, Cook County Graduate School of Medicine, 707 S. Wood St., Chicago 12.

Crippled children clinics

April 4 — Carrollton, First Baptist Church
April 5 — Alton (Rheumatic Fever), Alton Memorial Hospital
April 5 — Hinsdale, Hinsdale Sanitarium
April 5 — Rock Island (Cerebral Palsy), Foss Home, 3808-8th Ave.
April 6 — Cairo, Public Health Building
April 6 — Flora, Clay County Hospital
April 7 — Chicago Heights (Cardiac), St. James Hospital
April 11 — East St. Louis, St. Mary's Hospital
April 11 — Peoria, Children's Hospital
April 12 — Champaign-Urbana, McKinley Hospital
April 12 — Springfield, St. John's Hospital
April 14 — Evanston, St. Francis Hospital
April 18 — Belleville, St. Elizabeth's Hospital
April 18 — Danville, Lake View Hospital
April 18 — Quincy, Blessing Hospital
April 19 — Chicago Heights (General), St. James Hospital
April 20 — Elmhurst (Cardiac), Memorial Hospital of DuPage County
April 20 — Rockford, Rockford Memorial Hospital
April 25 — Effingham (Rheumatic Fever), St. Anthony Memorial Hospital
April 25 — Peoria, Children's Hospital
April 26 — Elgin, Sherman Hospital
April 27 — Bloomington (a.m., General; p.m., Cerebral Palsy), St. Joseph's Hospital
April 27 — Mt. Vernon, Masonic Temple

PG course in urology

The Frank E. Bunts Educational Institute affiliated with the Cleveland Clinic Foundation announces a postgraduate course "Current Urologic Problems" March 23 and 24 to be given in Cleveland.

Guest speakers will be Dr. Vincent J. O'Conor, Northwestern University School of Medicine, and Dr. Reed M. Nesbit, University of Michigan School of Medicine.

Registration will be limited to 125. The fee is $30. For applications write the Education Secretary, The Frank E. Bunts Educational Institute, 2020 E. 93rd St., Cleveland 6.

Watch for Your April Journal Which Will Publish

The Handbook

For The 1961 Annual Meeting ISMS

Delegates Will Not Receive Handbooks

***Prior* to Registration**

Reference Page Number 17

Schools in Nursing

PROFESSIONAL

BACCALAUREATE DEGREE PROGRAM

This usually requires four academic years and offers a college education with a major in nursing. Prepares for beginning bedside nursing and for beginning positions in public health nursing. Graduate study can be a next step to supervisory, administrative, and teaching positions.

Bloomington

Illinois Wesleyan University S. of N.

Carbondale

Southern Illinois University
Dept. of Nursing

Chicago

Loyola University S. of N.*
St. Xavier College S. of N.*
University of Illinois S. of N.*

De Kalb

Northern Illinois University S. of N.

DIPLOMA PROGRAM

This usually requires a three year course in a hospital or independent school of nursing. Prepares for beginning bedside nursing in hospitals and institutions. A college or university may grant credit toward a Bachelor Degree.

Alton

Alton Memorial Hospital S. of N.
St. Joseph's Hospital S. of N.*

Aurora

Copley Memorial Hospital S. of N.
St. Charles Hospital S. of N.*
St. Joseph Mercy Hospital S. of N.*

Bloomington

Mennonite Hospital S. of N.
St. Joseph's Hospital S. of N.

Canton

Graham Hospital S. of N.

Champaign

Julia F. Burnham S. of N.
Burnham City Hospital

Chicago

Alexian Brothers Hospital S. of N.*
Augustana Hospital S. of N.*
Chicago Wesley Memorial Hospital S. of N.*
Columbus Hospital S. of N.
Cook County S. of N.*
Evangelical Hospital S. of N.
Grant Hospital of Chicago S. of N.
Hospital of St. Anthony de Padua S. of N.

Illinois Masonic Hospital S. of N.
James Ward Thorne S. of N.
Passavant Memorial Hospital*
Lutheran Deaconess Hospital S. of N.
Michael Reese Hospital S. of N.*
Mt. Sinai Hospital S. of N.*
Norwegian American Hospital S. of N.
Presbyterian-St. Luke's S. of N.*
Provident Hospital S. of N.*
Ravenswood Hospital S. of N.†
Roseland Community Hospital S. of N.
St. Anne's Hospital S. of N.*
St. Bernard's Hospital S. of N.*
St. Elizabeth Hospital S. of N.*
St. Joseph Hospital S. of N.*
St. Mary of Nazareth S. of N.*
South Chicago Community Hospital S. of N.†
Swedish Covenant Hospital S. of N.*
Walther Memorial Hospital S. of N*

Danville

Lake View Memorial Hospital S. of N.
St. Elizabeth Hospital S. of N.

Decatur

Decatur and Macon County Hospital S. of N.*

Dixon

Katherine Shaw Bethea S. of N.
Dixon Public Hospital

Evanston

Evanston Hospital S. of N.*
St. Francis Hospital S. of N.*

Evergreen Park

Little Company of Mary Hospital S. of N.*

Freeport

Deaconess Hospital S. of N.

Galesburg

Galesburg Cottage Hospital S. of N.

Hinsdale

Hinsdale Sanitarium and Hospital S. of N.*

Jacksonville

Passavant Memorial Hospital S. of N.*

Joliet

St. Joseph S. of N.*
Silver Cross Hospital S. of N.*

Kankakee

St. Mary's Hospital S. of N.†

Moline

Lutheran Hospital S. of N.†
Moline Public Hospital S. of N.*

Oak Park

Oak Park Hospital S. of N.
West Suburban Hospital S. of N.*

Peoria

Methodist Hospital of Central Illinois S. of N.*
St. Francis Hospital S. of N.*

Quincy

Blessing Hospital S. of N.*
St. Mary's Hospital S. of N.

Rockford

Rockford Memorial Hospital S. of N.†
St. Anthony's Hospital S. of N.
Swedish American Hospital S. of N.

Rock Island

St. Anthony's Hospital S. of N.*

Springfield

Memorial Hospital S. of N.†
St. John's Hospital S. of N.*

Urbana

Mercy Hospital S. of N.*

Waukegan

St. Therese Hospital S. of N.*

ASSOCIATE DEGREE PROGRAM

This requires two academic years or longer in a junior or community college. Prepares for beginning bedside nursing.

Belleville

Belleville Junior College S. of N.

*** Programs which have received accreditation from the National League for Nursing.**

† Programs on which accreditation is deferred pending resurvey by the National League for Nursing.

PRACTICAL

Practical nursing courses usually require one year. Prepares for nursing under the direction of a professional nurse or doctor.

Entry Requirements: Illinois state law specifies completion of two years of high school or equivalent, or completion of eighth grade if over twenty-five years of age before July 1951.

Alton
F. W. Olin Vocational School of Practical Nursing
1211 Henry Street

Carbondale
Southern Illinois University Vocational Technical Institute School of Practical Nursing
Southern Acres Campus

Chicago
Practical Nursing Center
Chicago Public Schools
1820 Grenshaw Street

Mother Cabrini School of Practical Nursing
1200 West Cabrini Street

Decatur
Decatur School of Practical Nursing
Gastman School Building
210 West North Street

Dixon
Dixon State School of Practical Nursing
c/o Dixon State Hospital

East St. Louis
East St. Louis School District #189
School of Practical Nursing
Sixth and St. Louis Avenue

Harrisburg
Harrisburg Township High School
Board of Education
School of Practical Nursing

Hinsdale
Hinsdale Hospital School of Practical Nursing
120 North Oak Street

LaSalle
St. Mary's Hospital School of Practical Nursing
1015 O'Connor Street

Mattoon
Mattoon School of Practical Nursing
Mattoon Community Unit District #2
Central Junior High School
112 North Twenty-second Street

Maywood
Proviso School of Practical Nursing
Proviso East High School

Oak Forest
Oak Forest Hospital School of Practical Nursing
15900 South Cicero Avenue

Peoria
Peoria School of Practical Nursing
Peoria Public School District #150
3202 North Wisconsin Avenue

Rockford
Rockford School of Practical Nursing
201 South Madison Street

Springfield
Springfield Board of Education
Practical Nursing School
Lawrence School
101 East Laurel Avenue

Waukegan
Waukegan Township High School
Department of Trade and Industrial Training
Practical Nurse Program

Listings from National League for Nursing

from the Illinois Medical Journal
MARCH, 1961

NEWS of the STATE

County

Cook

PRESBYTERIAN-ST. LUKE'S NEW HEALTH CENTER. A new $2 million Health Center to be constructed at Presbyterian-St. Luke's Hospital on West Congress Parkway will provide diagnostic and therapeutic services, together with a preventive medicine program.

In 1960 more than 70,000 outpatients were served by the hospital. The Health Center fulfills an important function in the teaching program of the hospital as well as offering an important service to the community. Presbyterian-St. Luke's is the only voluntary general hospital in the Medical Center District.

Construction of the new outpatient clinic, made possible through contributions from Field Enterprises Charitable Corporation, The Chicago Community Trust, The Silver Spring Foundation, and two large anonymous donations, is scheduled to start this summer and will be completed in one year.

DR. BLOCK TO UNIVERSITY OF CHICAGO. Dr. George E. Block, who was a Fellow of the American Cancer Society at the University of Chicago Medical Center in 1955-1956, has returned to the university as an assistant professor in the department of surgery.

He has been an instructor in surgery at the University of Michigan, where he had received his M.D. degree in 1951, attending surgeon at the University Hospital and Veteran's Administration Hospital, and became assistant professor of surgery in 1960.

COURSE FOR NURSES RETURNING TO ACTIVE DUTY. The Chicago Council on Community Nursing has been offering refresher courses in nursing to spur the return of inactive nurses throughout the metropolitan area to active duty. The courses are free of charge and are four to six weeks in length. They include two hours of classroom instruction and four hours of supervised practice five days a week.

Five Chicago area hospitals have cooperated in giving the course. The last of the series begins April 17 at Lake Forest Hospital. It is open to all currently registered professional nurses, although the number accepted will be limited. Application forms may be obtained from the council, 8 S. Michigan Ave., Chicago, telephone CEntral 6-0464.

"X-RAY DETECTIVE" EXHIBIT. The Museum of Surgical Science of the International College of Surgeons Hall of Frame has a new exhibit "X-ray Detective." Thirty-one radiographs are used to exemplify the x-ray tube's detection of forgeries in art works, stamp collections, porcelain, and other rare objects.

The collection is a gift to the Museum and represents many years of research by Dr. Herbert C. Pollack, chairman of the radiology section of the college, and Charles F. Bridgeman, director of laboratories of Eastman Kodak, Rochester, N. Y.

The exhibit opened to the public admission-free February 1 and will run indefinitely.

ELECTED. Dr. Harry B. W. Benaron, medical director at Chicago Maternity Center and associate professor of obstetrics and gynecology at Northwestern University, has been elected to the board of directors of the Exchange National Bank of Chicago.

PHYSICIAN-POET. Dr. Erwin P. Zeisler of Michael Reese Hospital has recently written a book of lyrical and descriptive poems entitled "Poems on Pertinent Topics" under the pen

name of Walter Erwin. A number of his poems have medical themes. Pageant-Press, New York, is the publisher.

ELECTIONS. Dr. Paul H. Holinger, University of Illinois College of Medicine, has been elected chairman of the board of the Institute of Medicine of Chicago. Dr. Louis N. Katz, director of the cardiovascular department at Michael Reese Hospital, became president, and Dr. Howard L. Alt, Northwestern University Medical School, was named vice president. Dr. Ernest G. McEwen, also of Northwestern, was reelected secretary, and Dr. E. Lee Strohl, board president of the Municipal Tuberculosis Sanitarium, was renamed treasurer.

The Chicago Dermatological Society at its annual meeting elected its new officers. They are Dr. Frederick J. Szymanski, president; Dr. Hans M. Buley, vice president; and Dr. Frederick D. Malkinson, secretary-treasurer.

The Chicago Diabetes Association has elected the following physicians as directors for terms expiring February, 1964: Dr. Donald I. Bell, Dr. Arthur R. Colwell, Sr., Dr. Ford K. Hick, Dr. William S. Hoffman; Dr. Henry T. Ricketts, and Dr. Charles S. Vil.

Officers elected for the year include Dr. M. David Allweiss, president; Dr. Ralph E. Dolkart, secretary; and Mr. George K. Dahlin, treasurer.

HONORED. Northwestern University Medical School held a reception honoring Miss Edith Foster Sweet, director of the Medical School clinics, on her retirement after 35 years of service.

The reception was given by Dean Richard H. Young and the faculty and by the members of the Women's Service Club February 1.

Miss Sweet was a staff member on the medical school clinics from 1926 to 1950, became assistant director of the clinics, and in 1954 was named director.

DR. KIRSNER GIVEN PHI LAMDA KAPPA AWARD. Dr. Joseph B. Kirsner, professor of medicine at the University of Chicago, was the winner of the Grand Scientific Award of Phi Lamba Kappa fraternity.

Drs. Stuart Levin and Jerome Goldflies of Chicago were made regional vice presidents of the fraternity.

APPOINTED: Dr. M. M. Hipskind, Chicago, was recently appointed clinical professor in the department of otorhinolaryngology and chairman of the Executive Committee of the department at Stritch School of Medicine of Loyola University.

LECTURER. Dr. Louis B. Newman, chief of physical medicine and rehabilitation at the VA Research Hospital, and professor at Northwestern University Medical School, addressed the Oklahoma State Heart Association and the Oklahoma City Internists' Association February 8 on "Physical Medicine and Rehabilitation in Total Patient Care."

ACS MEETING. The Metropolitan Chicago Chapter of the American College of Surgeons held a panel symposium on "Pediatric Surgery" March 16 at the John B. Murphy Memorial Auditorium. Panel members from the staff of the Children's Memorial Hospital were Drs. Ovar Swenson, Joseph Boggs, Irving Schulman, and Harvey White.

ANNUAL PUSEY LECTURE. Dr. William Montagna, professor of biology, Brown University, gave the Annual William Allen Pusey Lecture March 15 at the Illini Union. His subject was "The Sweat Glands of Man."

Du Page

Dr. Otto L. Bettag, former state director of public welfare, was named medical director of the Du Page County Tuberculosis sanitarium in Glen Ellyn. He has resigned as welfare department control officer, a post he took three days before his eight-year tenure as state welfare director ended, in order to assume his new position.

Macon

Dr. Lee O. Frech, who retired and moved from Decatur to San Diego, Calif., in 1959, has been named to the 50-Year Club of the Illinois State Medical Society. The certificate was presented to Dr. Frech at a recent meeting of the

San Diego County Medical Society by the president of the association.

Dr. Frech had practiced in Decatur since 1921 and at the time of his retirement was the second oldest pediatrician in Illinois in length of practice. He is a past president of the Central Illinois Pediatric Society.

Madison

Dr. and Mrs. R. C. Berry held an open house on February 12 at their home in Lebanon celebrating their Golden Wedding Anniversary.

Vermilion

Donald Martin, director of public relations of the Illinois State Medical Society, was the speaker at the joint January meeting of the Vermilion County Bar Association. His subject was "Mutual Problems of Doctors and Lawyers." Mr. Martin was formerly director of public relations for the Illinois Bar Association.

Winnebago

Dr. Roland I. Pritikin, Rockford, president of the Henry Holland Hospitals Alumni Association and Fund, addressed the Kobe (Japan) Society of Ophthalmology, the Hong Kong Ophthalmological Society, the Philippine Ophthalmological Society, the Department of Ophthalmology, University of the Philippines, and other ophthalmological groups in the Far East during January.

General

Dr. Coggeshall at WHO meeting in India

Dr. Lowell T. Coggeshall, vice president in charge of medical and biological programs of the University of Chicago, was a member of the United States delegation attending the World Health Organization meeting held in February in New Delhi, India. Dr. Coggeshall is an international authority on malaria and other tropical diseases. He was also recently elected to the board of directors of the Josiah Macy, Jr. Foundation, New York City.

The World Health Organization has 103 member nations and during 1960 assisted in more than 600 health projects in 126 countries and territories, with increased attention in areas which earlier had relatively little health protection.

Nurses' fund drive

The American Nurses' Foundation, research arm of the American Nurses' Association, is conducting a nationwide drive to raise $1 million for nursing research. Members of health professions, foundations, industry, and the general public are being asked to contribute.

The Illinois drive is sponsored by the Illinois Nurses' Association headed by Mrs. Ann Zercher, director of nurses, Louis A. Weiss Memorial Hospital, and Louis Zahn, president, Zahn Drug Company. Their goal is $100,000 of the total. The drive began in January and will run through Illinois Nurses' Week March 19-25.

Funds will be used for research in nursing procedures, effects on nursing of changes outside the profession, demands on nursing care of administrative units such as hospitals, clinics and health agencies, and nursing needs of patients in particular disease categories. Special emphasis will be placed on the nursing needs of the chronically ill.

Illinois fluoridation program

Eight more communities began using fluoridated water supplies to reduce tooth decay during 1960, bringing the state total to 123.

Illinois residents now drinking fluoridated water by choice number 5,204,694, and 611,540 persons are drinking water that is naturally fluoridated.

For the benefit of youngsters living in rural areas or communities where public water supplies are not fluoridated, the Illinois Department of Public Health has demonstration programs in the application of sodium fluoride directly to the teeth. Through these demonstrations and the resulting locally sponsored permanent programs, almost 14,000 children received the treatments last year.

The department is also establishing demonstration dental clinics in cooperation with several selected county health departments. The clinics are designed to provide dental care for children from low-income families. Special studies are

being made of tooth decay and gum diseases in children.

Disease in Illinois, 1960

Provisional 1960 figures for some reportable diseases in Illinois have been released by the State Department of Public Health.

Disease	1960	1959	Increase or Decrease
Gonorrhea	22,808	18,596	+4,212
Syphilis	8,577	8,510	+ 67
Diphtheria	9	10	− 1
Smallpox	0	0	0
Meningitis	697	713	− 16
Typhoid fever	19	18	− 1
Brucellosis	71	71	
Encephalitis	154	133	+ 21
Hepatitis	1,655	855	+ 800

Camp for diabetic children

This summer camp, under the auspices of the Chicago Diabetes Association, will be conducted from July 16 through August 6 at Holiday Home, Lake Geneva, Wis. Boys and girls from 8 through 14 years of age are eligible.

As in previous years, the camp will be staffed by resident physicians, a nurse, two dietitians, and a laboratory technician, in addition to the regular counseling and domestic staff.

Rates are arranged in accordance with individual circumstances.

Applications may be obtained from, and inquiries directed to the Chicago Diabetes Association, 620 N. Michigan Ave., Chicago 11. Telephone Superior 7-8842.

Deaths

GEORGE J. BAUMGARTNER*, Forest Park, a graduate of the University of Illinois College of Medicine in 1924, died January 25, aged 63. He had been health commissioner of Forest Park from 1947 to 1959 and a staff member at Oak Park Hospital for 39 years.

ANDREW E. BLACK, Chicago, a graduate of Northwestern University Medical School in 1906, died October 7, aged 80.

ROBERT L. BORCHERT*, Chicago, a graduate of the University of Illinois College of Medicine in 1910, died January 29, aged 72. He was on the staff of Swedish Covenant Hospital.

WARD P. BURDICK*, retired, Rockford, a graduate of Bennett Medical College in 1912, died January 19, aged 78. He was on the staff of St. Anthony's Hospital for 33 years before retiring in 1949.

WILLIAM J. DEVLIN*, Chicago, a graduate of the Stritch School of Medicine of Loyola University in 1947, died January 8, aged 55. He was ordained a priest in 1936, and in 1947 became the first Jesuit ever to receive an M.D. after becoming a member of the order. He was a diplomate of the National Board of Medical Examiners and a clinical assistant in the psychiatry and neurology department at Loyola's Stritch School of Medicine. He was also active in Loyola's Center of Psychological Guidance and served for two years in the neurological department and psychopathic ward of Cook County Hospital. Father Devlin was a staff member of the Illinois Neuropsychiatric Institute from 1949 to 1951, a fellow of the Institute of Juvenile research from 1951 to 1952, and a senior staff member of the institute from 1952 to 1955. In 1951 he went to England to help form the world's first association of Catholic psychologists. He was a member of the American Psychiatric, Psychological, and Ortho-psychiatric associations; the American Academy of Neurology; the American Academy of Psychotherapy; and Sigma Xi fraternity.

HOWARD T. KNIGHT*, Elgin, a graduate of the University of Illinois College of Medicine in 1913, died February 3, aged 71. He had practiced medicine in Elgin since 1916.

ROBERT D. MCCORMICK*, retired, Pompano Beach, Fla., a graduate of the Chicago Medical School in 1923, died February 1, aged 69. He was medical advisor to the Kraft Foods division of the National Dairy Products Corporation from 1929 to 1948. From 1952 to 1957 he was regional medical officer for the U.S. Civil Service Commission in Chicago. He had been a faculty member of the University of Chicago Medical College and had served on the staffs of Jackson Park and Woodlawn hospitals and the old Washington Park Community Hospital.

JOSEPH THOMAS O'NEILL*, 69, pediatrician of Ottawa, and immediate past president of the Illinois State Medical Society, died in Billings Hospital, Chicago, February 25.

Dr. O'Neill was born in Boston in 1892 and was graduated from the Chicago College of Medicine and Surgery, predecessor of the Stritch School of Medicine of Loyola University, in 1916. He served as a lieutenant in the Army Medical Corps and after World War I began general practice in Joliet. Because of his love of children he later went to Europe for postgraduate courses in pediatrics and in 1927 opened an office in Ottawa to practice his specialty. He continued to live there as a beloved citizen until his death.

Dr. Joseph T. O'Neill

Dr. O'Neill had long been an active participant in society affairs. He had served on the Council since 1948 and was its chairman in 1955 and 1956. This past year he had been chairman of the Permanent Home Committee and the Committee to Study Postgraduate Education, in addition to being Councillor-at-Large for the Society. He was one of the original members of the Committee on Maternal Welfare when it was formed 28 years ago and was a member of the Nutrition and the Journal committees for over a decade. He was also on the Educational Committee in 1952, 1954, and 1956, and on the Finance Committee in 1951.

He was president of the La Salle County Medical Society in 1942-43 and in 1960 was a delegate to the American Medical Association, succeeding several years as an alternate delegate.

For the past two years he had been a member of the Blue Cross-Blue Shield essay committee which judged high school student compositions on subjects related to medicine.

Dr. O'Neill had been public health officer and school physician in Ottawa and was also a member of the American Legion, the Elks, and the Ottawa Boat Club.

LEON S. SEIDLER*, Chicago, a graduate of the University of Illinois College of Medicine in 1913, died January 7, aged 70. He was on the staff at Michael Reese Hospital and had practiced in Chicago for 46 years.

CHARLES O. SHALLET*, Chicago, a graduate of Northwestern University Medical School in 1926, died January 31, aged 64. He had practiced in Chicago for 34 years.

RALPH D. SULLIVAN*, Chicago, a graduate of the Stritch School of Medicine of Loyola University in 1940, died January 16, aged 47. He was a member of the staff of St. George Hospital and an examining physician for the Selective Service System.

VICTOR DARWIN THOMAS*, St. Louis, Mo., a graduate of the Jenner Medical College in 1902, died December 6, aged 84. He was a member of the 50-Year Club of the Illinois State Medical Society, of which he was an Emeritus Member. He had been a resident physician at St. Mary's of Nazareth Hospital and assistant physician at Peoria State, Buffalo State, Greystone Park State, Terrell State, and Whitfield State hospitals.

HARRY I. VAN TUYL, Hinsdale, a graduate of Northwestern University Medical School in 1898, died October 10, aged 91. He was professor and chairman of the department of anatomy at Northwestern's Dental School.

LUCIUS W. WIMBY*, Chicago, a graduate of the University of Chicago School of Medicine in 1942, died January 8, aged 43. He was vice chairman of the medical department at Provident Hospital, and a member of the Prairie State and National Medical societies.

EDWARD C. WRIGHTSMAN*, Chicago, a graduate of the Northwestern University Medical School in 1905, died January 11, aged 80. He was on the staff of South Chicago Community Hospital. He had practiced in Chicago since 1905, and was a fellow of the American Medical Association.

WILLIAM M. YOCKEY*, retired, Decatur, a graduate of Rush Medical College in 1891, died January 7, aged 92. He retired in 1940.

**Indicates member of the Illinois State Medical Society.*

BOOK REVIEWS

OCCUPATIONAL DISEASES AND INDUSTRIAL MEDICINE. Rutherford T. Johnstone, M.D., and Seward E. Miller, M.D. $12. Pp. 482. Philadelphia, W. B. Saunders Company, 1960.

This is a completely new text and bears little resemblance to the 1948 edition by the senior author. In the twenty chapters the authors cover every aspect of industrial medical practice in a well organized, logical manner. The administrative, social, welfare, insurance, rehabilitative, and employee adjustment phases are presented following an introductory chapter on the scope and organization of medical services in industry. With this background, the authors in Part II devote thirteen chapters to specific occupational diseases covering gases, solvents, dusts, bacterial diseases, metals, resins, propellants, pesticides, physical agents (vibration, noise, compression, heat and cold, light and the electromagnetic spectrum, radiation). Supplementing this replete schedule is a table of the 1960 Threshold Limits for Toxic Gases and Dusts, including the latest recommended additions. A fifteen page glossary of industrial terms and eighteen page subject index complete the text.

The format, edition size, print, and the smooth, low reflective paper make a readable, enjoyable, usable volume. The task of condensing the many facets of industrial medicine to a small volume while retaining a sense of completeness with little omission is well done. This speaks well for the ability and practical experience of the authors, both of whom are internationally known both in the specialty and as teachers.

The editing has been meticulous, as one would expect of the authors, and very few errors were noted. I would prefer that Shavers' disease be covered in all aspects in one section rather than have the radiologic, clinical, and pathologic aspects in widely separated insertions. Siderosis and other exposures in welding are not included in the text. Dermatitis is mentioned as it occurs in some specific exposures but is not formally presented in a specific chapter. Antimony and arsenic are presented as metals and metalloids with only a chapter reference to the gaseous compounds, stibine and arsine, and no reference to the inclusion of arsenicals with the insecticides. However, the isolated contextual insertions have merit, and brevity of the edition precludes perfection. The chapter on the pneumoconioses covers a controversial area and arouses questions on the part of a reviewer; however, looking back objectively, the authors have given a good summary.

In fact, the whole field of medicine in industry is excellently presented in a series of brief reviews. The volume gives a good general picture of the field, yet is detailed enough to be a good reference text. This book must be on the reading shelf of any physician with industrial contacts.

Eugene L. Walsh, M.D.

FUNDAMENTALS OF CHEST ROENTGENOLOGY. Benjamin Felson, M.D. $10. Pp. 301. Philadelphia & London, W. B. Saunders Company, 1960.

This is a short textbook of x-ray diagnosis which attempts to solve most of the diagnostic problems of chest disease utilizing fundamentals and discussing specific disease entities only insofar as they illustrate or are illustrated by the principles presented. These fundamentals are twenty-five special signs which the author states he has borrowed. He especially credits Dr. Felix G. Fleishner, "whose understanding of the complexities of this field is truly profound."

The roentgen work-up by means of fluoroscopy and necessary films is covered first. There follows a detailed explanation of the two main signs: the silhouette sign and the air bronchogram as a means of detecting and localizing even subtle chest lesions. The author covers lobar and then

segmental anatomy and variations and then includes a discussion of the hili, vessels, and lymph nodes before going on to the pleura, extrapleural space, and diaphragm, including hernias. He concludes by describing some additional signs of value in chest x-ray diagnosis and then tabulates the normal roentgen findings in 18,000 normal chest roentgenograms with regard to: level of hilar shadows, length of aorta, tracheal deviation, cardio-thoracic ratio and calcification, to mention but a few.

In addition to a bibliography at the back of the book which thoroughly covers the subject matter, there is inclusion of bibliographic references in the legends beneath some of the photographic reproductions.

The purpose of the book is to describe and explain the several signs which have been shown to have important diagnostic implications in chest x-ray interpretation. This is accomplished with ease by this recognized radiologist as he presents this material. He has done this for some time as a refresher course for members of his specialty at one of their annual meetings and then as joint author along with fifty specialists in a book which presented a short version of the material presented here. A review of the medical literature shows that Dr. Felson has written considerably in his field of interest, the chest and especially the lung.

The numerous photographic reproductions are of excellent quality, well chosen, and clearly labeled. They number 450 on 238 figures in 270 pages of text. A single column format is used for this compact book. The index is adequate, and the text amplifies the illustrations nicely.

This book will be enthusiastically received by radiologists and their residents, and by teachers of medicine and especially chest specialists. It is just as enthusiastically recommended for them and any others who are placed in the position of interpreting chest films.

William E. Bundesen, M.D.

OUTLINE OF PATHOLOGY. John H. Manhold, Jr., D.M.D., and Theodore E. Bolden, D.D.S. $4.75. Pp. 340. Philadelphia, W. B. Saunders Company, 1960.

As with most outlines, this book consists of series of definitions of diseases followed by some, though brief, discussion. Where present, the elaboration includes pathologic physiology and some microscopic descriptions.

The nature of the book is well described in the preface, "a relatively thorough treatment of basic pathologic processes" and "only the more specific attributes of the basic processes as they apply to the organ systems." It is complete in that it covers most disease entities. In the reviewer's opinion, such topics as plague, bejel, bizarre infections could be replaced by a mention of arsenic and boric acid poisonings as well as further development of trauma and radiation reaction.

The portion dealing with organ systems covers the important pathologic aspects and is satisfactorily concise in this analysis.

Certainly, the outline fulfills the purposes of the authors and can be used as a basis for study as well as a repeat survey.

M. C. Wheelock, M.D.

THE OFFICE ASSISTANT IN MEDICAL PRACTICE. Portia M. Frederick and Carol Towner. $5.25. Pp. 407. Philadelphia, W. B. Saunders Company, 1960.

This handbook is the updated revision of one by the same authors in 1956. The text deals exclusively with physician assisting — the earlier edition included dental assisting — and details latest equipment and procedures.

The book is divided into two major sections. The first deals with business and secretarial aspects; the second, with medical phases of office assisting. Equipment and procedures with which every assistant should be familiar are illustrated. Typical is the instrument set-up for particular physical examinations.

There is something of value for each member of the medical team in this book. It is a refresher in professional routine for the nurse and technician. It provides excellent instruction in current business and clerical procedures. Some front office activities discussed are reconciling a bank statement, use of the simplified insurance forms, and cyclical billing. Cyclical billing is alphabetical group billing — e.g., A's billed first day of the month, B's the second day, etc. Special emphasis is given to the importance of good public relations between personnel in the doctor's office and the public.

The medical secretary may gain a better knowledge of assisting in the examination room —

if ever she is called upon to do so. The text may also serve as a check on her secretarial and public relations performance. Medical secretaries employed by physicians who do research, lecture, or teach will find the special chapter on library and editorial duties most helpful. Included is instruction for preparing a manuscript, gathering information for abstracts, and how to use the library.

The "one-girl" office assistant and the high school graduate with no professional training will find every aspect of medical assisting discussed in an interesting and easily understood manner. Of primary importance are chapters dealing with appointment scheduling, the right kind of patient reception, and the do's and don'ts of telephone techniques. This is a valuable book to have in the doctor's office for handy reference.

Even the doctor who has or plans to have medical aides in his office will learn what clerical and semi-professional duties are ordinarily delegated to medical assistants and how to adapt these to his type of practice. It may also assist the physician in outlining office duties for employees and save hours of his time.

The authors, Portia M. Frederick and Carol Towner, are authorities in the field of medical assistant teaching and medical public relations. They sum up the objectives of their book in these words, " . . . to establish higher standards of efficiency among women employed as medical secretaries and assistants, and to inspire these women to render honest, loyal and more efficient service to the profession and to the public which they serve." These words were taken from the objectives of state medical assistant associations belonging to the American Association of Medical Assistants.

Caesar Portes, M.D.

THE MANAGEMENT OF FRACTURES AND SOFT TISSUE INJURIES. The Committee on Trauma, American College of Surgeons. $5. Pp. 372. Philadelphia, W. B. Saunders Company, 1960.

Why there should be a disassociation of treatment for soft tissue and skeletal injury has never been clear. Serious errors are committed when one system is cared for without regard or knowledge of other systems. The Committee on Trauma has combined their two excellent monographs into one volume, unifying the care of the injured patient.

Each section has been reworked and in certain instances rewritten. The principles and recommendations for treatment are presented in a concise, thorough manner. The chapters can be read with facility, and there is a liberal sprinkling of illustrations to augment the text. Immediate care, transportation, work-up, and method of treatment of the acutely injured person can be gleaned from its pages.

It must be recommended to the surgeon dealing with trauma and should be available to house staff members in every hospital emergency room. The volume makes a fine gift for a resident surgeon.

W. B. Stromberg, Jr., M.D.

Measure of success

What is success and how may it be judged? Alan Seeger has said, "Success in life means doing that thing than which nothing else conceivable seems more noble, or satisfying or remunerative." For every man there is a guiding star of ambition, — a secret and sometimes unrecognized heart's desire. Just as the personality and abilities of one person differ from those of another, so does this heart's desire differ for one and another, and progress toward fulfillment of one's desire represents success in one's chosen field; indeed success may truly be said to lie in the wholehearted effort one makes to attain that desire, for few achieve complete fulfillment. *Edwin H. Lawson, M.D. Success in Medicine. South. M. J. December 1960.*

ANNOUNCING A CHANGE IN NAME
without change in formula or patient benefits

Centalex is now called **elixir**

cenalene

Trademark

a cerebral tonic-stimulant fortified with neurotropic vitamins

helps the geriatric patient return from the shadowland of senility

To improve mental function and behavior patterns in the geriatric patient, Elixir CENALENE provides the cerebral-stimulating action of **pentylenetetrazol** fortified with **thiamine, niacinamide,** and **vitamin B_{12}.** Specifically counteracts typical symptoms of degenerative changes in the central nervous system of elderly patients, particularly those with cerebral arteriosclerosis... and can be given indefinitely to responsive patients because of low incidence of side effects or toxicity in usual effective dosage.

Patients are helped to make better social adjustments... to lead happier, more useful lives... and to become **less of a problem** to themselves, relatives, or institutions.

Each teaspoonful (5 ml.) contains 100 mg. Cenalene (brand of pentylenetetrazol), 1.67 mg. thiamine HCl, 7.5 mg. niacinamide, and 2.5 mcg. cyanocobalamin (vitamin B_{12}); alcohol, 15%. **Available** in bottles of one pint and one gallon.

Literature on request

THE CENTRAL PHARMACAL COMPANY
Products Born of Continuous Research
Seymour, Indiana

Hypertension in Israel

It can be seen that there is a greater prevalence of diastolic hypertension, and of the ageing process as seen in the retina, among the Yemenites who have lived in Israel for over 25 years as compared with Yemenite new immigrants who have not lived for more than 10 years in the country. The findings parallel the differences in the prevalence of diabetes, and in the blood-cholesterol and blood-phospholipids estimates between both groups, and confirm the impression that cardiovascular disease and arteriosclerosis are more prevalent in the settled group.

There is a great difference between the conditions of life in Israel and in Yemen, and there is little doubt that the different prevalences of hypertension and involutionary sclerosis between the two groups is the result of these differences. The lack of intermarriage with other groups of Jews eliminates constitutional and genetic factors as an explanation of the differences. The main differences between the two groups are in food habits and in the general strain of living to which they are exposed. The latter can be best described as the ambition for a higher standard of living, and the general "speeding-up" involved in the Western style of culture. *Daniel Brunner, M.D., et al. Myocardial Infarction among Members of Communal Settlements in Israel. Lancet. Nov. 12, 1960.*

The English GP

It is our particular good fortune to belong to medicine when it is again changing, or to be accurate has just changed. The increase of knowledge has enforced specialization—which itself ensures that knowledge will continue to grow at speed. But, because in Britain no one now lives far from a specialist, the general practitioner is prevented from doing much of the therapeutic job he was trained for. Instead, he is left with an overwhelming amount of other problems of diagnosis, treatment, and prevention of disease, for which he was not trained. He must transfer many patients to the care of another doctor, and he must be sure that he chooses the right specialty. *John Ellis, M.D. Preparation for the Profession. Lancet. Nov. 12, 1960.*

Reliable

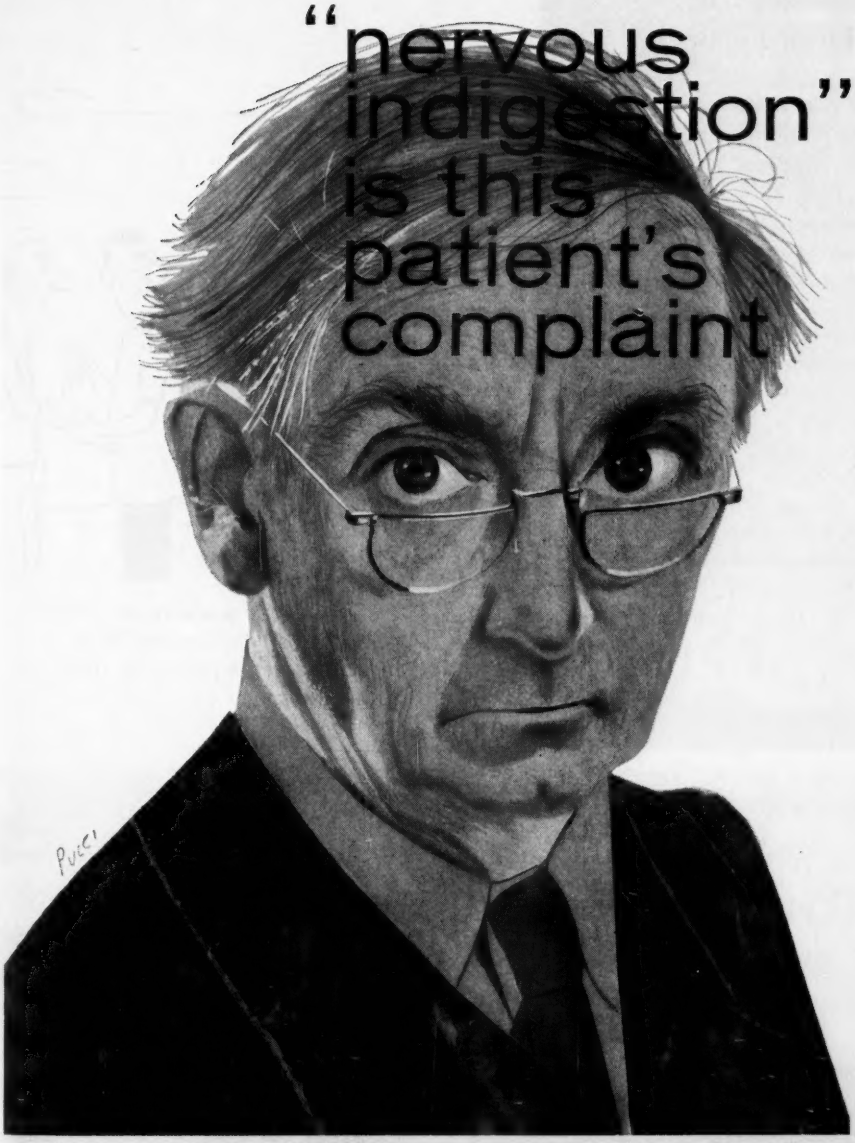
PROFESSIONAL LIABILITY
INDIVIDUAL INSURANCE
with proficient defense
that cuts the cost

THE
MEDICAL PROTECTIVE COMPANY
FORT WAYNE, INDIANA

Professional Protection Exclusively since 1899

CHICAGO OFFICE:
T. J. Hoehn, E. M. Breier, W. R. Clouston and T. J. Pandak, Representatives
1142-44 Marshall Field Annex Bldg. Telephone STate 2-0990

SPRINGFIELD OFFICE: F. A. Seeman, Representative
Mailing Address: Rochester, Illinois Telephone (Springfield) Kingswood 4-2251



antispasmodic
-sedative
-digestant

Donnazyme®

This old gentleman is fictitious but his problem is not. In fact, the label he aptly tags his symptoms with might even suit one or two of your patients. If they are tense or mildly anxious, and you find a functional or ill-defined gastrointestinal spasm and an inadequate supply of digestive enzymes, that is "nervous indigestion." For these conditions, Donnazyme offers specific medication which relieves GI spasm, calms the emotions, and supplements deficient digestive enzymes. Two tablets t.i.d. (after meals), or as needed.

Each specially constructed tablet contains the equivalent of one-half Donnatal® tablet plus digestive enzymes. **In the gastric-soluble outer layer:** hyoscyamine sulfate, 0.0518 mg.; atropine sulfate, 0.0097 mg.; hyoscine hydrobromide, 0.0033 mg.; phenobarbital (⅛ gr.), 8.1 mg.; and pepsin, NF, 150 mg. **In the enteric-coated core:** pancreatin, NF, 300 mg.; and bile salts, 150 mg.

A. H. Robins Company, Inc.
RICHMOND 20, VIRGINIA

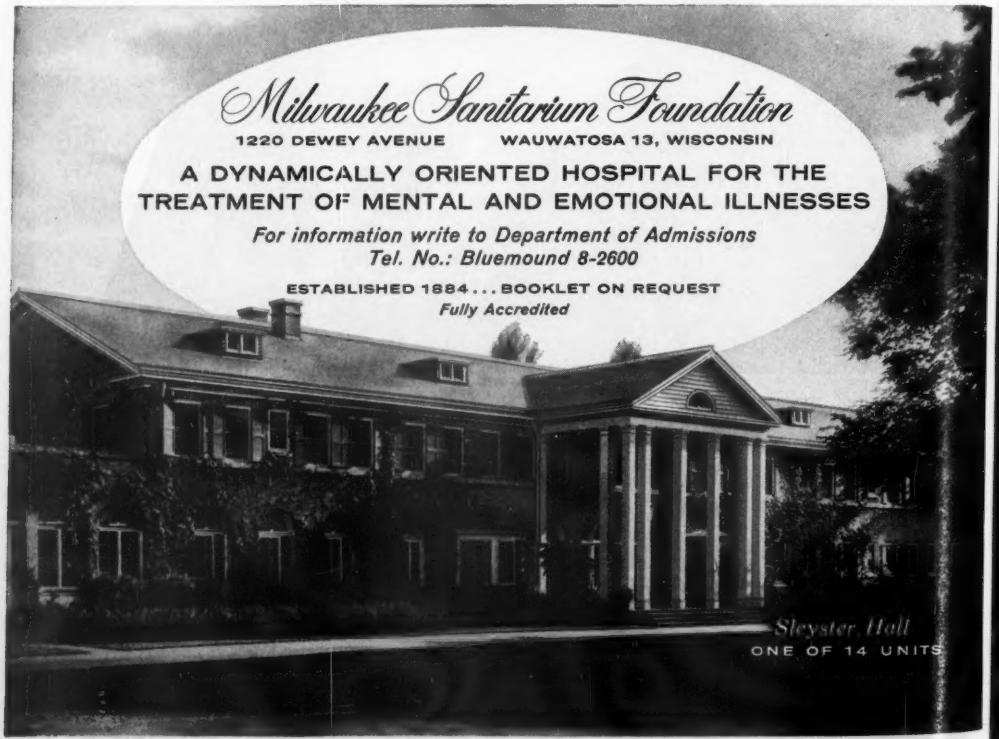
The educated patient

There is a mystery about books on illness. Many doctors refuse to let their patients read them. They say that the more ignorant among them are bewildered by the medical terms, and feel that they are worse than is the case. I feel that there is something in this, but very often the doctors are rationalizing and refuse to give information for the unconscious reason that their magical — or, in modern style — scientific power will pass away with the patient's knowledge. But knowledge is nearly always better than ignorance for anyone — for patients as for doctors. The known, however bad it is, is nearly always better than the unknown. The patient, knowing what is the matter with himself, can help the doctor on his symptoms. He can keep a cool head instead of a mind nearly panic-stricken with the unknown. His calls on the doctor are less frequent, and he is far less prone, instead of more inclined, to hypochondria. *Douglas Ritchie. Stroke. Faber and Faber, London, 1960.*

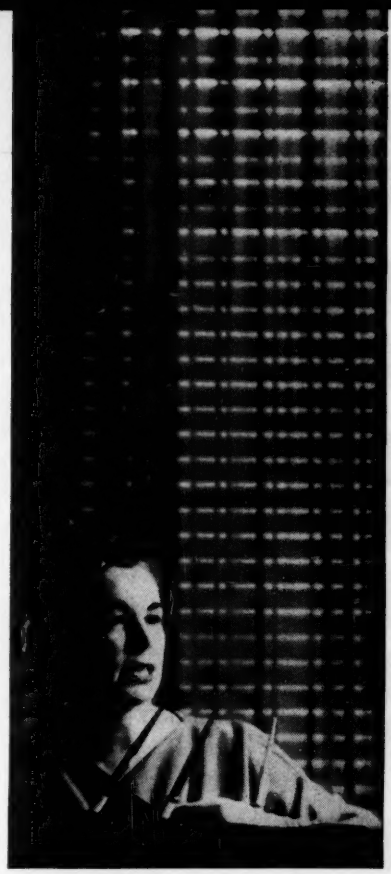
It is part of the cure to wish to be cured.

—*Seneca*

Doc, if you'd tried a flax-seed poultice like I first suggested, it'd be well by now!


Milwaukee Sanitarium Foundation
1220 DEWEY AVENUE WAUWATOSA 13, WISCONSIN
A DYNAMICALLY ORIENTED HOSPITAL FOR THE TREATMENT OF MENTAL AND EMOTIONAL ILLNESSES
For information write to Department of Admissions
Tel. No.: Bluemound 8-2600
ESTABLISHED 1884 . . . BOOKLET ON REQUEST
Fully Accredited
Sleyster Hall
ONE OF 14 UNITS

symptoms gone... feels like a new woman



basic therapy in vaginitis eliminates symptoms · itching · burning · leukorrhea · malodor · destroys pathogens · Trichomonas vaginalis · Candida (Monilia) albicans · nonspecific organisms...alone or in combination · has these advantages · high rates of clinical and cultural cures · effectiveness even in menstrual blood and vaginal debris · safe and nonirritating to delicate inflamed tissue · esthetically acceptable with no disagreeable staining

TRICOFURON®

(nifuroxime and furazolidone) Improved

Powder / Suppositories

® EATON LABORATORIES
Division of The Norwich Pharmacal Company
NORWICH, NEW YORK

BREED RADIUM INSTITUTE

SUITE 633 PITTSFIELD BUILDING
55 EAST WASHINGTON STREET
CHICAGO 2, ILLINOIS

TUMOR THERAPY

J. ERNEST BREED, B.S. M.D.
BOARD CERTIFIED

RAndolph 6-5794

OVER 80 YEARS'
SPECIALIZED EXPERIENCE
IN THE RESTORATIVE
TREATMENT OF

"THE PROBLEM DRINKER"

At The Keeley Institute your patients are assured of receiving:

- the most modern, coordinated, comprehensive, rehabilitative regimen
- in addition to medical, nutritional and physiotherapeutic treatment, we also offer psychiatric diagnosis and psychotherapy
- full cooperation throughout with the referring physician
- in addition to the care of the alcoholic we also treat narcotic and drug addiction
- surprisingly low cost—to cover all medical care, medicines, laboratory work, room and excellent cuisine

You can obtain more detailed information by writing us direct.

WE WELCOME YOUR REFERRALS...

THE KEELEY INSTITUTE
DWIGHT, ILLINOIS

Member American Hospital Association, Member Illinois Hospital Association. Licensed by the Department of Public Health, State of Illinois.

Sober-up in a hurry

An investigation of the use of thyroid hormone L-tri-iodothyronine in the management of acute alcoholism has shown this agent to have a prompt sobering-up action when given intravenously in a total dosage of 200 microgm. Among 12 patients who received this treatment and were compared with 8 untreated, acutely intoxicated controls, the following results were obtained: the rate of blood alcohol decline averaged 15.0 mg. per 100 ml. per hour in the controls and 32.1 mg. per 100 ml. per hour in the treated patients; patients given the hormone were judged to be clinically sober and able to give a rational medical history within two hours after the injection; the odor of alcohol was undetectable on the breath two hours after treatment, although it persisted for six to ten hours in the untreated controls. Intravenous therapy appears to be a valuable adjunct in the treatment of acute alcoholism, particularly when such a patient is admitted to the hospital in a stuporous or semicomatose state secondary to severe intoxication and is unable to give a coherent medical history. *Marshall Goldberg, M. D., et al. Intravenous Tri-Iodothyronine in Acute Alcoholic Intoxication. New England J. Med. Dec. 29, 1960.*

Over emphasis in surgery

At the moment, too much emphasis is being placed on cardiac surgery to the neglect, I am afraid, of many other problems which are of equal importance to the patient and which occur with much greater frequency. No doubt this situation will correct itself once the newness and glamour begins to subside, though meanwhile too many young men are specializing in this branch of surgery, considering the demands for future needs and the responsibilities most have incurred to provide for their families. Someone has remarked that soon there will be more cardiac surgeons than cardiac patients. *Joseph E. Strode, M.D. The Surgeon's Responsibilities. West. J. Surg. November-December 1960.*

The truest mark of being born with great qualities, is being born without envy.

—*La Rochefoucauld*

for real or potential ulcer...

PATHIBAMATE®

meprobamate with PATHILON® tridihexethyl chloride Lederle

anticholinergic... treats the trauma

tranquilizer... controls the tension

Indications: duodenal ulcer; gastric ulcer; intestinal colic; spastic and irritable colon; ileitis; esophageal spasm; anxiety neurosis with gastrointestinal symptoms, and gastric hypermotility.

Administration and Dosage: PATHIBAMATE-400 (full meprobamate effect)—1 tablet three times a day at mealtime, and 2 tablets at bedtime. PATHIBAMATE-200 (limited meprobamate effect)—1 or 2 tablets three times a day at mealtime, and 2 tablets at bedtime. Adjust to patient response.

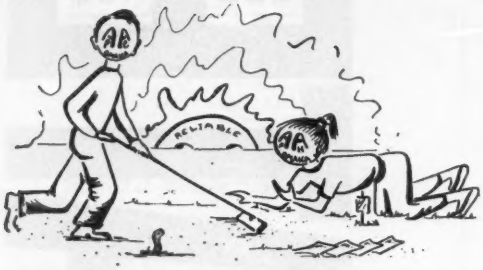
Contraindications: glaucoma; pyloric obstruction, and obstruction of the urinary bladder neck.

Lederle

LEDERLE LABORATORIES
A Division of AMERICAN CYANAMID COMPANY
Pearl River, New York

200 400

PATHIBAMATE



PROTECTION AGAINST LOSS OF INCOME FROM ACCIDENT & SICKNESS AS WELL AS HOSPITAL EXPENSE BENEFITS FOR YOU AND ALL YOUR ELIGIBLE DEPENDENTS

ALL PREMIUMS COME FROM — PHYSICIANS SURGEONS DENTISTS — ALL BENEFITS GO TO

PHYSICIANS CASUALTY & HEALTH ASSOCIATIONS

Since 1902

Handsome Professional Appointment Book
Sent To You FREE Upon Request

OMAHA 31, NEBRASKA

CONSIDER NOW

These Outstanding Insurance Plans available to Members of THE ILLINOIS STATE MEDICAL SOCIETY:

1. THE DISABILITY PLAN:
   Provides an income when unable to practice at your profession due to an accident or illness condition.

2. MAJOR HOSPITAL & NURSE EXPENSE PLAN:
   The new Catastrophic Hospital and Nurse Expense Plan makes up to $10,000.00 available for you and your dependents.

Both Plans provide a substantial premium saving.

Write or telephone today for further details

PARKER, ALESHIRE & COMPANY

Established 1901

175 West Jackson Blvd. Chicago 4, Illinois
Telephone WAbash 2-1011

Administrators of Special Group Plans
for Professional Organizations
and
General Insurance — Life, Fire
Automobile, all Casualty Lines

The hospital in medical practice

The parties to the Iowa litigation arrived at a compromise agreement which was subsequently enacted into law. This law expressly provides that radiology and pathology services performed in hospitals are medical services which must be billed and paid for as such. It provides that hospitals will not interfere with the medical acts and decisions of the physicians. At the same time, the law does recognize the standing of the hospital as the "third party" by authorizing it to maintain facilities for the services and by giving it an equal voice in the employment of technicians and in the establishment of fees.

There is reason to hope that in Iowa, at least, the conflict has been resolved in a way that will preserve for medicine its dominant position in the doctor-patient relationship, but which recognizes the hospital as a benign third party, and that this relationship can be happily maintained so as to permit both medical and hospital services to realize their fullest possible potentials for the benefit of the most important person, the patient.

It is discouraging to note, however, that the American Hospital Association has produced and published a legal brief which argues that the corporate practice rule is an acceptable principle as applied to *profit-making* corporations, quacks, and charlatans, but that it should not be applicable as a means of preventing *non-profit hospitals* from practicing medicine. The underlying argument is that hospitals should dominate the entire health field, of which the practice of medicine is only a part, and that as hospitals are public-spirited institutions, they can better be trusted with the over-all health care of the patient than can the practicing physicians. This concept, which strikes at the essence of the "Three's a Crowd" principle, will be certain to encounter active resistance, should it be pressed by the American Hospital Association. *R. B. Throckmorton. J. Iowa State Med. Soc. December, 1960.*

Go make thy garden as fair as thou canst,
  Thou workest never alone;
And he whose plot is next to thine
  May see it and mend his own.

—*Robert Collyer*

Dependable
Pain Reliever

Professional confidence in the uniformity, potency and purity of Bayer Aspirin is evidenced by ever increasing recommendation. Today Bayer Aspirin is the most widely accepted brand of analgesic in the world.

We welcome your requests for samples of Bayer Aspirin and Flavored Bayer Aspirin for Children.

THE BAYER COMPANY, DIVISION OF STERLING DRUG INC., 1450 BROADWAY, NEW YORK 18, N.Y.

The medical politician

Is it the so-called medical politician who is devoting his life to the training of future physicians? I say "so-called" because the term is a slanderous misnomer when applied to the physician who gives untiringly of his time and his interest to the furthering of professional activities through the medium of organized medicine. Politicians, according to dictionary definition, are primarily interested in political office or profit from them as a source of personal gain. This can in no sense be true of those who work through medical societies for the benefit of all the profession and for the public good. Recognition by one's colleagues is a personal gratification but cannot be considered the full measure of success in medicine. *Edwin H. Lawson, M.D. Success in Medicine. South. M. J. December 1960.*

No gain is so certain as that which proceeds from the economical use of what you already have.

—*Latin Proverb*

Do you take conventions off your income tax or put them on your expense account?

FOREST
HOSPITAL

THERAPEUTIC—NOT CUSTODIAL

Forest Hospital is devoted to intensive, short-term treatment for psychiatric patients. The guiding philosophy is therapeutic—not custodial. The goal is early return to the community.

Is this a realistic goal? Our records show that it is. Average-patient-stay at Forest Hospital compares well with average-patient-stay at general hospitals. When your patient requires psychiatric care, consider the advantages of therapeutically oriented Forest Hospital.

Fully Approved: Central Inspection Board of American Psychiatric Association

Joint Commission on Accreditation of Hospitals

A Blue Cross-Blue Shield Plan Hospital

Rudolph G. Novick, M.D.

Medical Director

555 WILSON LANE • DES PLAINES, ILLINOIS • VANDERBILT 4-2193

stops tension

For neuralgias, dysmenorrhea, upper respiratory distress, and postsurgical conditions... new compound kills pain, stops tension, reduces fever—gives more complete relief than other analgesics.

Soma Compound is an entirely new, totally different analgesic combination that contains three drugs. First, Soma: a new type of analgesic that has proved to be highly effective in relieving both pain and tension.* Second, phenacetin: a "standard" analgesic and antipyretic. Third, caffeine: a safe, mild stimulant for elevation of mood. As a result, the patient gets more complete relief than he does with other analgesics. Soma Compound is nonnarcotic and nonaddicting. It reduces pain perception without impairing the natural defense reflexes.*

NEW NONNARCOTIC ANALGESIC

soma® Compound

Composition: Soma (carisoprodol), 200 mg.; phenacetin, 160 mg.; caffeine, 32 mg.
Dosage: 1 or 2 tablets q.i.d.
Supplied: Bottles of 50 apricot-colored, scored tablets.

NEW FOR MORE SEVERE PAIN

soma® Compound + codeine

BOOSTS THE EFFECTIVENESS OF CODEINE: Soma Compound boosts the effectiveness of codeine. Therefore, only ¼ grain of codeine phosphate is supplied to relieve the more severe pain that usually requires ½ grain. **Composition:** Same as Soma Compound plus ¼ grain codeine phosphate. **Dosage:** 1 or 2 tablets q.i.d. **Supplied:** Bottles of 50 white, lozenge-shaped tablets; subject to Federal Narcotics Regulations.

**References available on request.*

WALLACE LABORATORIES · Cranbury, N. J.

The NORBURY SANATORIUM

JACKSONVILLE, ILLINOIS — INCORPORATED and LICENSED

For the Treatment of Nervous and Mental Disorders

FRANK GARM NORBURY, M.D., Medical Director

Address Communications — THE NORBURY SANATORIUM, Jacksonville, Illinois

Diet misnomers

A study has been made of the intake of calories, protein, fat, and carbohydrate of six obese subjects before and during the consumption of a "high-fat" diet. For this diet, the subjects were instructed to limit only carbohydrate, and to consume as much fat and protein as they wished. All subjects lost weight during the two weeks on the diet. Their daily intake of calories was found to be from 200 to 1900 lower, a reduction of between 13% and 55%. No subject consumed significantly more fat than before; three subjects consumed significantly less.

Thus, the term "high-fat" diet is wrong; it should be "low-carbohydrate" diet. The obese patient loses weight on this diet, not because of some peculiar metabolism of fat but because of a reduction in calories. The implications of these findings are discussed in relation to theories of appetite control. *J. Yudkin, M.D., and M. Carey. Treatment of Obesity by the "High-Fat" Diet. The Lancet, Oct. 29, 1960.*

An idea, to be suggestive, must come to the individual with the force of a revelation.

—*William James*

We've just got time for a resolution castigating the American Medical Association .... the bar closes in 15 minutes.

FAIRVIEW HOSPITAL

2828 S. Prairie Avenue
Chicago 16, Ill.
Victory 2-1650

Devoted to Medical Psychiatry
for the active treatment of
Mental and Nervous Disorders

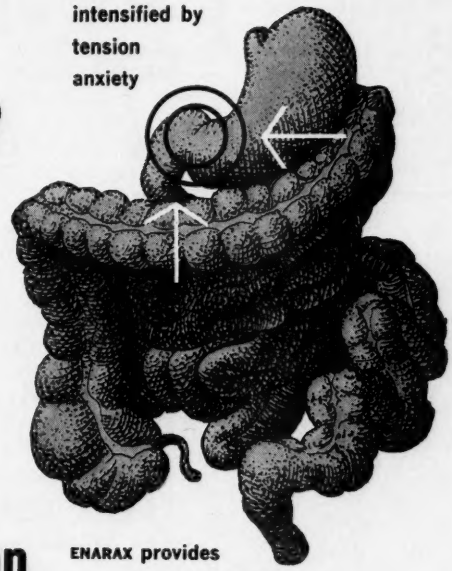
BLUE CROSS Member Hospital

ALCOHOLISM Treated by Comprehensive Medical-Psychiatric Methods

J. DENNIS FREUND, M.D., F.A.P.A.
Medical Director

double trouble of the g.i. tract?

spasm
hyperacidity
pain...
intensified by
tension
anxiety



dual action in the therapeutic attack

ENARAX provides
10 mg. oxyphencyclimine
the inherently
long-acting anticholinergic
plus 25 mg. ATARAX®†
the tranquilizer
that does not stimulate
gastric secretion

ENARAX®

A SENTRY FOR THE G.I. TRACT **B.I.D.**

Proven effective for continuous relief of both physical and emotional aspects of G.I. disease — hypermotility, hyperacidity, and hyperemotivity. One tablet b.i.d. provides 24-hour control of symptoms in peptic ulcer, gastritis, gastroenteritis, colitis, functional bowel syndrome, duodenitis, hiatus hernia (symptomatic), irritable bowel syndrome, pylorospasm, cardiospasm, biliary tract dysfunctions, and dysmenorrhea. ENARAX has been successful in 92% of cases.[1-3] Let your G.I. patients profit from its dual, full-time therapeutic action.

Dosage: One-half to one tablet twice daily — preferably in the morning and before retiring. The maintenance dose should be adjusted according to the therapeutic response. Use with caution in patients with prostatic hypertrophy and only with ophthalmological supervision in glaucoma. **Supplied:** In bottles of 60 black-and-white scored tablets. Prescription only.

References: 1. Hock, C. W.: Am. J. Gastroenterol. 34:293 (Sept.) 1960. 2. Leming, B. H., Jr.: Clin. Med. 6:423 (Mar.) 1959. 3. Data in Roerig Medical Department files.

†brand of hydroxyzine

FOR HEMATOPOIETIC STIMULATION WHERE OCCULT BLEEDING IS PRESENT **HEPTUNA®** PLUS THE **COMPLETE** ANEMIA THERAPY

New York 17, N. Y.
Division, Chas. Pfizer & Co., Inc.
Science for the World's Well-Being™

BELLEVUE PLACE

For

NERVOUS and MENTAL DISEASES

★

Edward Ross, M.D., Medical Director
BATAVIA PHONE
ILLINOIS TRemont 9-1520

Classified Ads

RATES FOR CLASSIFIED ADVERTISEMENTS — For 30 words or less: 1 insertion, $3.00; 3 insertions, $8.00; 6 insertions, $14.00; 12 insertions, $24.00; from 30 to 50 words: 1 insertion, $4.00; 3 insertions, $10.50; 6 insertions, $20.00; 12 insertions, $30.00. Extra words: 1 insertion 10c each; 3 insertions, 25c each; 6 insertions, 40c each; 12 insertions, 50c each. A fee of 25c is charged for those advertisers who have answers sent care of the Journal. Cash in advance must accompany copy.

PHYSICIANS SEEKING LOCATIONS IN ILLINOIS — are notified to contact the Physician's Placement Service in the office of the Illinois State Medical Society, 360 N. Michigan Ave., Chicago 1, Illinois. A file listing communities seeking physicians is maintained. There is no charge for this service of the Society.

WANTED: Two physicians, one interested in pediatrics & one interested in internal medicine, & both willing to do some general practice, to join small estab. group in Central Ill. Starting salary $15,000 with partnership status early. Box 323 Illinois Medical Journal, 360 N. Michigan Ave., Chicago 1. 3/61

WANTED: Established six man group needs board eligible or certified pediatrician and an obstetrician-gynecologist. Scenic location. Attractive salary. Full partnership after three years. Medical Block Clinic, Red Wing, Minn. 4/61

REAL ESTATE FOR SALE: Southwest Chicago. Retiring. 36 yr. solo General Practice same location. Central air conditioned office Modern home combination. Many extras. Need ambitious man. Take over. Leaving state. YA 7-2122 or Box 325 Ill. Med. Jl., 360 N. Michigan, Chicago 1. 4/61

WANTED TO PURCHASE: Lucrative, well established general practice. Practice preferably located in north or central Illinois, Box 326, Illinois Med. Jl., 360 N. Michigan, Chicago 1. 4/61

EXCELLENT OPPORTUNITY for G.P., internist, obstetrician or pediatrician in new medical center centrally located between two hospitals. Doctor ratio for this area, 1 to every 1,300! Fastest growing area in Southern California. Write Davis F. Henley, 1510 Yucca Drive, San Bernardino, California. 4/61

FOR SALE: Established general practice in Chicago surburb. Equipment & brick office building for sale or lease. Excellent location, near several hospitals. Box 327 Ill. Med. Jl., or phone FOrest 6-4146. 4/61

WRITER'S CRAMP CAN BE CURED! For research, editing and writing help from an A.M.A.-trained editor, call or write Helen Bugbee, 1441 N. State, WH 4-5014.

EXCEL. OPPORTUNITY, Southern Calif. G.P. or surgeon who will do gen'l practice. Air-cond. office. Adequate starting remuneration; partnership if mutually compatible. A. M. Avrick, M.D. 3810 La Crescenta, Verdugo City, Calif.

WILL BUILD TO SUIT — air conditioned medical building 28′ by 70′ for two doctors at 1968 Foster near Damen. Parking in rear, reasonable rent, fall occupancy. Call IRving 8-6937, Chicago.

WANTED: Gen. Pract. to associate with estab. C.P. New mod. medical bldg. fully equipped. Rapidly growing central San Joaquin Valley. 113 miles south of San Francisco, 80 miles Yosemite Park. Town 20,000 trade area 88,000, rich agricultural area. Two hosp. total 483 beds. R. L. Ruble, M.D., 545 W. 26th, Merced, Calif.

1700 BED PROGRESSIVE HOSPITAL-GENERAL PRACTITIONER with **PSYCHIATRIC** experience — salary $10,635 to $12,210: extra allowance of 15% if Board certified. Write: Manager, Veterans Administration Hospital, Danville, Illinois. 5/61

WANTED: Pediatrician, OB/Gyn, Orthopedic Surgeon, Gastro enterologist, Allergist to join 16-man Clinic. Starting salary $16,000-$18,000. Partnership status after one yr. Weber Medical Clinic, 600 E. Main St. Olney, Ill. 8/61

ELMHURST: Beau. 6 room apart. on large lot. Ideal location for Dr's office & home. In center of transportation, churches, & shop. dist. Elec. kitchen & drapes throughout, must see to apprec. Write T. Gibbons, 134 S. York, Elmhurst, Ill. Phone TE 2-0019.

NOW—BETTER THAN EVER!!

THE ILLINOIS STATE MEDICAL SOCIETY

GROUP DISABILITY PLAN

WATCH FOR THE ANNOUNCEMENT ABOUT THIS ENLARGED PROGRAM

MAKE CERTAIN *YOU* REVIEW THE *NEW* FEATURES WHICH ARE AVAILABLE TO MEMBERS OF THE SOCIETY

Take advantage of this opportunity to modernize *YOUR* Sickness and Accident Coverage.

***TODAY*, more than ever, *YOU* need adequate insurance to safeguard *YOUR INCOME* in the event *YOU* are disabled.**

IF YOU DESIRE ADDITIONAL INFORMATION AFTER RECEIVING THE ANNOUNCEMENT

PLEASE WRITE OR TELEPHONE

PARKER, ALESHIRE & COMPANY

175 W. Jackson Blvd. Chicago 4, WAbash 2-1011

New emphasis on genetics

Genetics is rapidly finding its way into ordinary medical conversation. In the very recent past, the subject of genetics as applied to medicine was ignored and generally thought to possess a very nebulous and highly theoretical application for physicians in the actual practice of medicine. However, it is not unusual to pick up a current medical publication and find some aspect of this subject discussed. We are beginning to probe farther than the "X" and "Y" chromosomes. We are beginning to learn of the chromosomal character of cells. The chemistry of genetics is receiving more than a passing interest; as doctors we are becoming more concerned with the familial significance of a growing list of medical abnormalities. And as a sign of the times, the specialty boards are beginning to include questions on genetics in their examinations. So whether we like it or not, it looks as though we will have to familiarize ourselves with as much of genetics as we can absorb. *Thomas J. Marland, M.D. Editorial. Genetics—A New Medical 'Must.' J. Mississippi M. A. December 1960.*